

RADIO CONTROLLED ELECTRIC POWERED RACING BUGGY

OFF-ROAD RACER

ULTIMA II

- HIGH-PERFORMANCE 2WD OFF-ROADER. DEVELOPED FROM THE ORIGINAL CHAMPIONSHIP-WINNING ULTIMA.
- EXCELLENT CHOICE FOR THE NEWCOMER TO COMPETITION. CAN BE UPGRADED WITH MANY OPTIONAL PARTS AS SKILLS ADVANCE.
- LONG-TRAVEL ALL-INDEPENDENT SUSPENSION WITH QUALITY OIL-FILLED SHOCKS TO SOAK UP BUMPS AND KEEP YOUR BUGGY ON THE WINNING COURSE.
- STRONG, RIGID AND LIGHT DOUBLE-DECK CHASSIS WITH GLASS-REINFORCED KELRON MAIN CHASSIS. FLAT, NO-DRAG BOTTOM SURFACE.
- MOUNTS PROVIDED FOR BOTH STICK AND SADDLEPACK BATTERIES. EASY INSTALLATION AND REMOVAL.
- POWERFUL LeMANS STOCK 05 MOTOR AND HIGH-QUALITY ROTARY SPEED CONTROLLER INCLUDED IN KIT.

- BATTERY: 7.2V - 1200/1700mAh (NOT INCLUDED)
RADIO: 2 CHANNEL BEC TYPE (NOT INCLUDED)

1:10 SCALE



KYOSHO®
THE FINEST RADIO CONTROL MODELS

KIT No.3118

BEFORE ASSEMBLY

○ Read the instruction carefully.

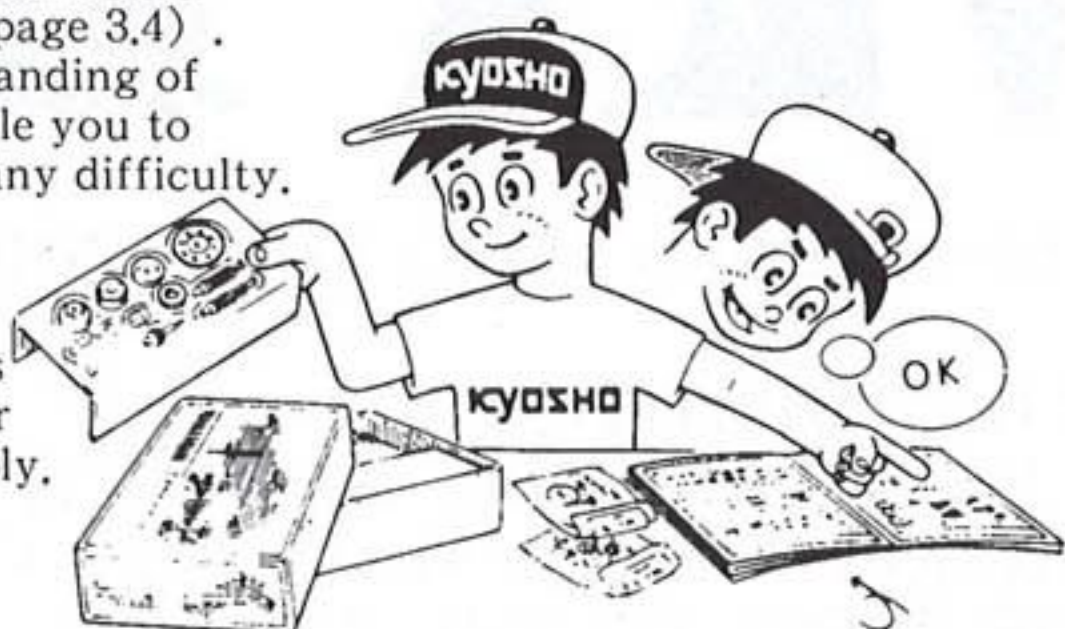
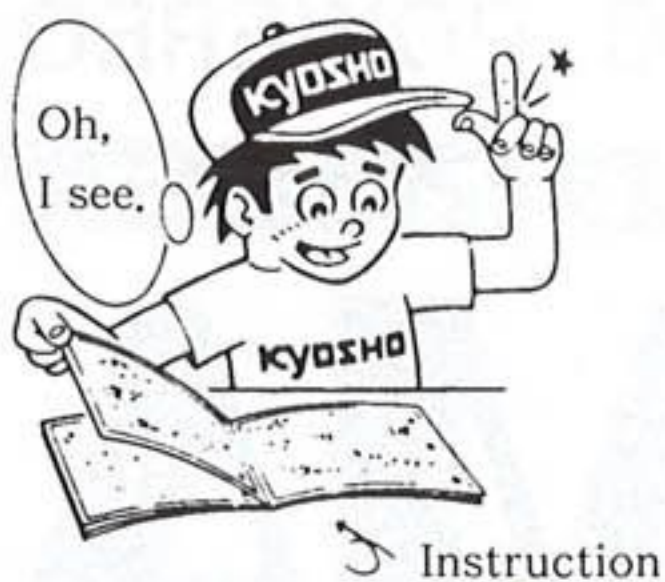
You can assemble the kit more easily if you have grasped the general idea of steps and structure beforehand by reading it through to the end.

○ Check the parts in the kits.

Check to see if all the parts are correctly bagged as they are listed in the "Bagged Parts List" (page 3.4). Your thorough understanding of the assemble will enable you to build the kit without any difficulty.

Check the components in the kit prior to your starting of the assembly.

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



SW CEMENT ... Place to put some locktite.

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

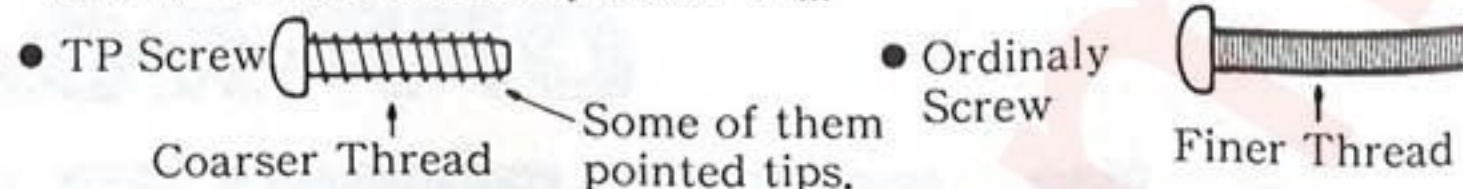
GREASE ... Point where grease should applied.

(It will reduce friction and assure smooth movement.)

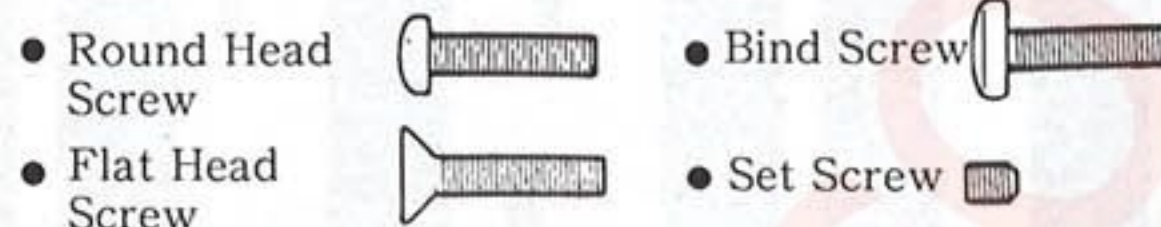
... Steps where your particular attention is required.

○ 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 this instruction.



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

○ Pick up the correct parts and screw.

Compare the shape and size of small parts, such as screws, nuts, and washers.

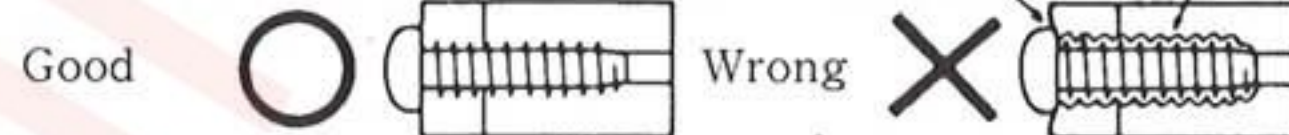
○ Be sure about the location and direction of parts to install.

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 to 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 part on the screw goes into the plastic part and you feel some resistance from the tightening.

Over tighten may strip the thread in the plastic.



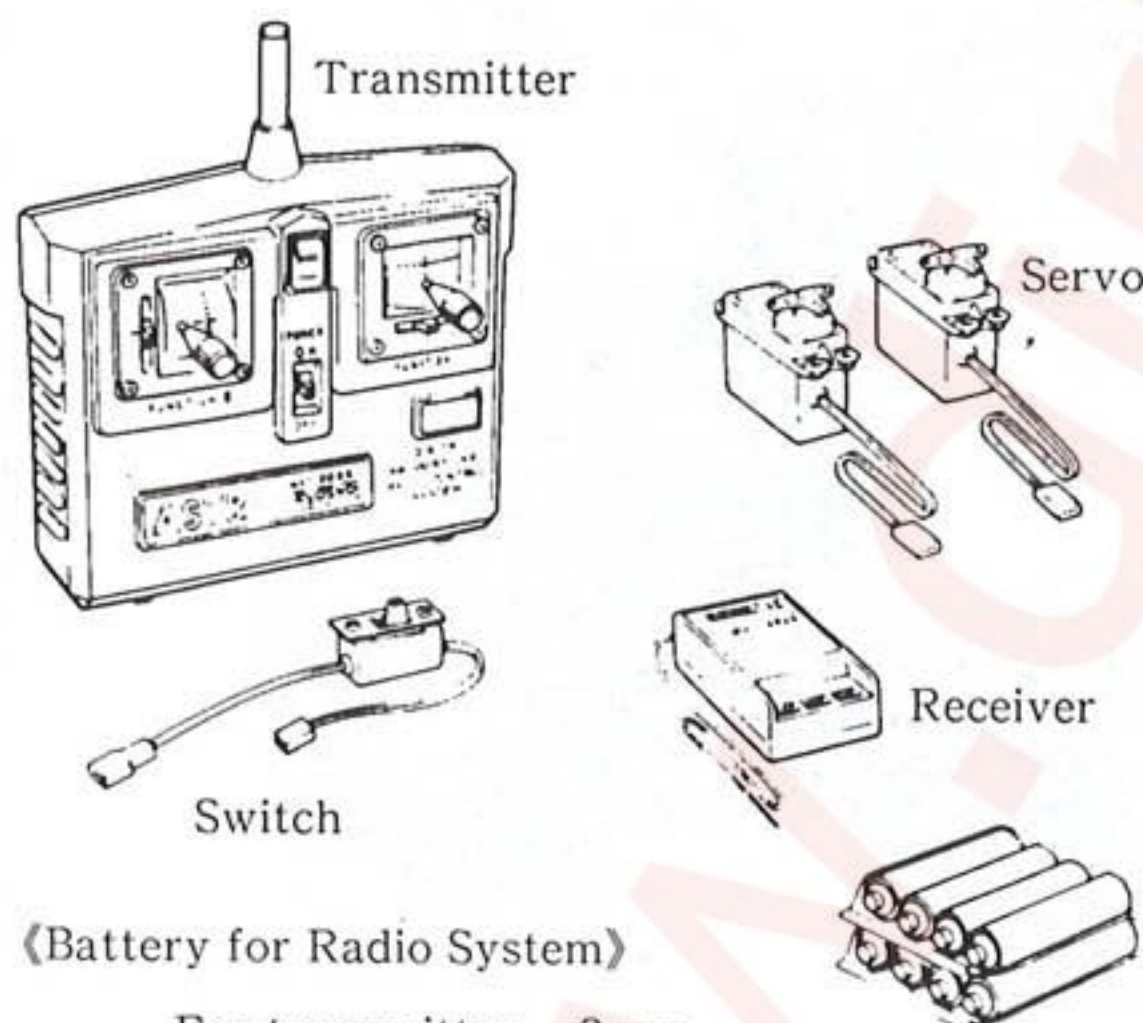
THINGS NEED BESIDES THE KIT

《2 Channel Radio System》



Two types of radio control set are on the market, the stick type and the steering wheel type. Choose which ever you like.

Ultima II is designed to use BEC type radio. A radio contained in a box with this type of logo is a BEC type radio.

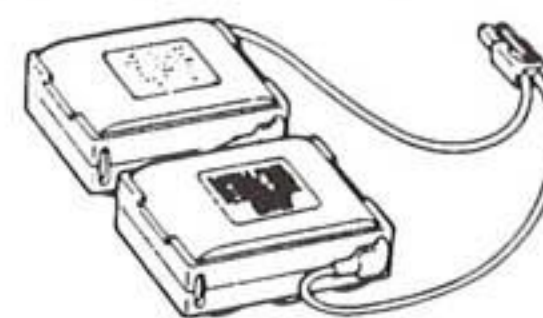


《Battery for Radio System》

For transmitter ... 8 pcs.

《Ni-Cad Battery》

Ultima II is designed to use a rechargeable 7.2V Ni-Cad Battery Pack.



No.2310
7.2V Sprint Battery SCR



No.2331
7.2V - 1200 SCR
Saddle Pack

No.2320
7.2V - 1700 SCE
Saddle Pack

No.2306
7.2V Power Battery

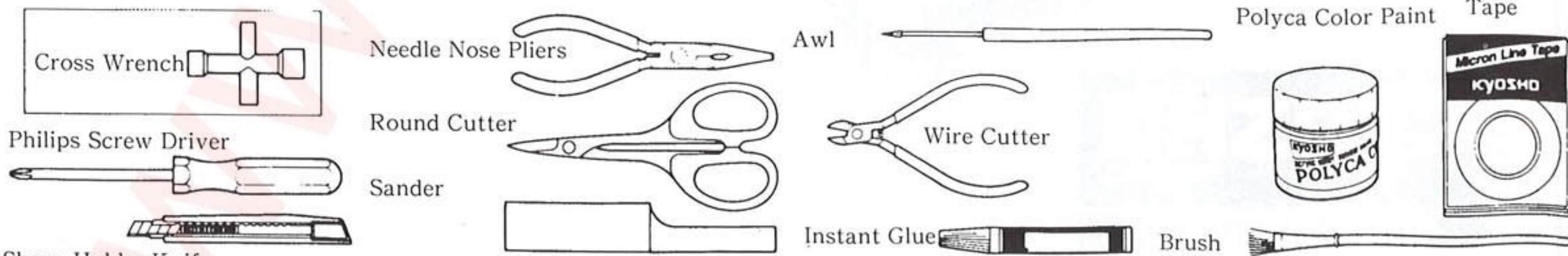


《Charger for Ni-Cad Battery》

The Kyosho's Ni-Cad battery is high performance. If it is charged correctly, it will operate for a considerable period of time. Use one of the chargers listed which suits your need.

Model	Name	Time	Rate	Features
2326	7.2V Power Charger	15 min.	70%	For bigginer Built-in timer
1849	Multi Charger II	20 min.	100%	Built-in timer, Ammeter
2246	FET Auto Charger	20 min.	100%	Trickle charging Automatic cut-off

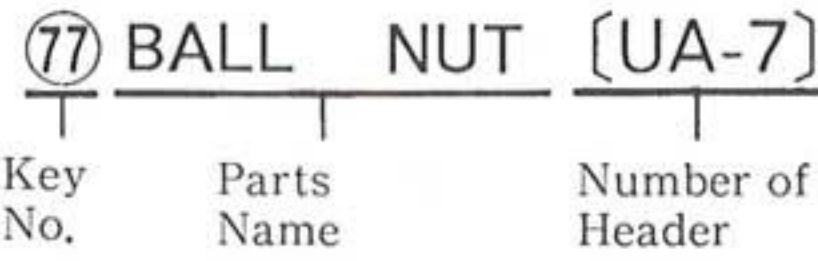
《Tools Required》 Cross Wrench, a Hex Key, Grease, and Screw Locking compound are in the kit.



《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.

<Example>



Bag No.	Key #	Parts Name	Q'ty	Step	
UA-2	1	Sus. Shaft (B)	2	11	
	2	Motor Plate	1	5	
	3	5.8 φ Ball (Silver)	2	2	
	4	Front Shock Stay	1	14	
	5	Rear "	1	9	
	6	4 φ x8 Metal Bushing	4	35	
	7	5 φ x10 "	6	5 7 11	
	8	10 φ x14 "	2	4	
UA-3	9	Front Wheel	2	34	
	10	Rear "	2	34	
UA-4	11	Joint	2	4	
	12	Rear Wheel Shaft	2	11	
	13	Drive Washer	2	11	
	14	Bevel Gear (A)	2	3	
	15	" (B)	2	3	
	16	Bevel Shaft	1	3	
	17	Pinion Gear (15T)	1	28	
	18	Swing Shaft	2	12	
	19	Center Gear Shaft	1	27	
	20	Final Pinion Gear	1	6	
	21	Counter Gear	1	5	
	22	Main Gear	1	3	
	23	Diff. Case	1	3	
	24	Center Gear	1	27	
	25	Front Wheel Shaft	2	13	
	26	Counter Gear Shaft	1	5	
	27	2 φ x11 Pin	3	5 6	
	28	Servo Saver Shaft	2	18	
	29	Radio Plate Post	2	25	
	30	Metal Collar	2	3	
	31	Center Gear Metal Bushing	1	27	
	32	O Ring (Black)	1	27	
	UA-5	33	Front Shock Shaft	2	1
		34	Rear "	2	1
		★ 35	Shock Piston	4	1
		36	Pressure Top	4	2
		37	Front Shock Spring (Black)	2	2
		38	Rear " (Gold)	2	2
39		Front Shock Case	2	1	
40		Rear "	2	1	
★ 41		Shock Cap	4	2	
★ 42		Spring Holder	4	2	
★ 43		Spring Spacer	4	2	
44		Shock Ring	4	2	
45		Shock End	4	1	
46		E Ring (E2.5)	10	1 Sparex2	
UA-6	★ 47	Front Hub	2	13	
	★ 48	Rear "	2	11	
	★ 49	Knuckle Arm (Right)	1	13	
	★ 50	" (Left)	1	13	
	51	Front Bulk Head	1	14	

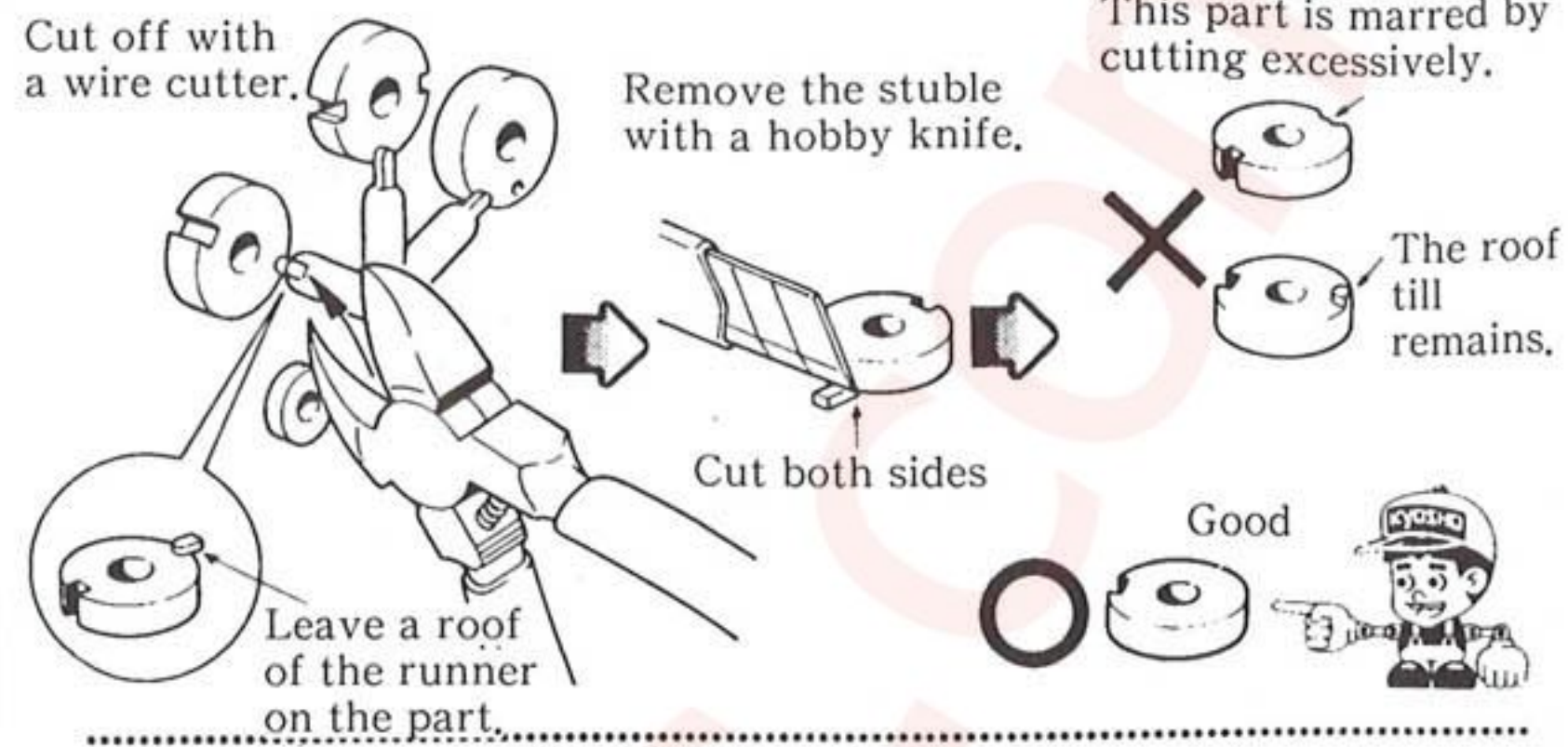
Bag No.	Key #	Parts Name	Q'ty	Step
UA-6	52	Rear Bulk Stopper	1	12
	53	Rear Bulk Head	1	9
	54	Gear Cover	1	29
	55	Front Sus. Arm	2	15
	56	Rear "	2	11
	★ 57	Servo Saver (A)	1	17
	★ 58	" (B)	1	17
	★ 59	" (C)	1	17
	★ 60	" (D)	1	17
	★ 61	Servo Saver Collar	2	13
	★ 62	Gear Box Hatch	1	10
	★ 63	Servo Stay	4	21
	★ 64	Shock Collar	4	30 32
	★ 65	Antenna Post	1	25
	★ 66	Body Hook	1	23
	★ 67	Wing Stay (A)	2	31
	★ 68	" (B)	2	31
	★ 69	" (C)	2	31 Sparex2
	★ 70	Wing Washer	4	40
	★ 71	Battery Stopper	2	36
	★ 72	Stopper Post	4	36
	★ 73	Stopper Washer (Thin)	4	36
	★ 74	" (Thick)	4	36
	UA-7	121	Bumper	1	30
75		5.8 φ Ball End	12	3
76		4.8 φ "	2	21
77		Ball Nut	1	17
78		M2.6 Pillow Ball (Black)	6	9 13 17
79		M3 " (Silver)	8	11 13 14 32
80		Sus. Shaft (A) (Black)	2	11
81		" (C) (Silver)	2	15
82		" (D)	2	15
83		King Pin	2	13
84		Center Rod	1	17
UA-8	85	Speed Control Rod	1	21
	86	Steering Rod	1	21
	87	Rod (S)	4	3
	88	" (L)	2	3
	89	4.8 φ Ball	1	23
	90	Gear Box (R)	1	5
	91	" (L)	1	7
	92	Radio Plate	1	23
	93	Double Sided Tape	1	33
	94	Strap (S)	2	23 33
	95	NiCd Strap	2	36
	96	Antenna Pipe	1	33
	97	Shock Oil (Green)	1	2
	98	Screw Locking Compound	1	
	99	Silicone Grease	1	
100	Cross Wrench	1		
101	Gear Cover Seal	1	29	

BAGGED PARTS LIST (2)

LAYOUT DRAWING OF PLASTIC PARTS ON RUNNERS

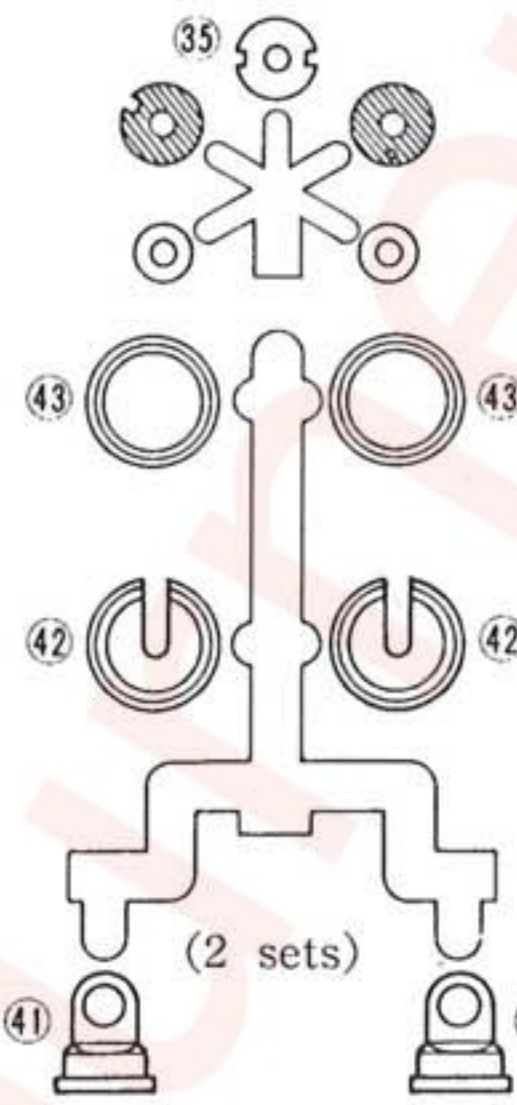
Bag No.	Key #	Parts Name	Q'ty	Step	
UA-8	102	Rotary Speed Controller	1	23	
	103	15W Resistor	1	26	
	104	Resistor Heatsink	1	26	
	105	Resistor Base	1	26	
	106	Resistor Stay	1	26	
	107	Le Mans Stock 05 Motor	1	23	
	108	Motor Cord	1 set	23	
	BOX	109	Front Tire	2	34
110		Rear "	2	34	
111		Body	1	37	
112		Main Chassis	1	10	
113		Wing	1	37	
114		Decal	1	39	
		Instruction	1		
UA-1	46	E Ring (E2.5)	9	11 15 Sparex1	
	115	" (E3)	3	13 Sparex1	
	116	" (E4)	2	7 Sparex1	
	117	Hook Pin	7	29 36 40	
	118	Body Pin	2	40	
	119	Hex key (1.5)	1	23	
	120	" (2)	1	4	
		RH Screw	M2 X 4	1	
		"	M3 X 16	4	
		"	M3 X 33	3	
		Bind Screw	M2.6 X 6	1	
		"	M3 X 6	10	
		"	M3 X 18	4	
		"	M3 X 35	1	
		"	M4 X 8	4	
		FH Screw	M3 X 6	4	
		"	M4 X 8	8	
		"	M4 X 12	4	
		TP RH Screw	M2 X 8	1	
		"	M2 X 10	4	
		"	M3 X 18	1	
		TP Bind Screw	M2.6 X 12	4	
		"	M3 X 8	18	
		"	M3 X 10	3	
		TP FH Screw	M3 X 10	2	
		"	M3 X 15	5	
		Set Screw	M3 X 3	1	
		"	M4 X 4	2	
		Nut	M2.6	8	3 kinds
		"	M3	10	
		Nylon Nut	M3	4	
		"	M4 Flange	4	
	Washer	M3	1		
	"	M4	2		
	"	M5	2		

《When cutting off parts from a runner ...》

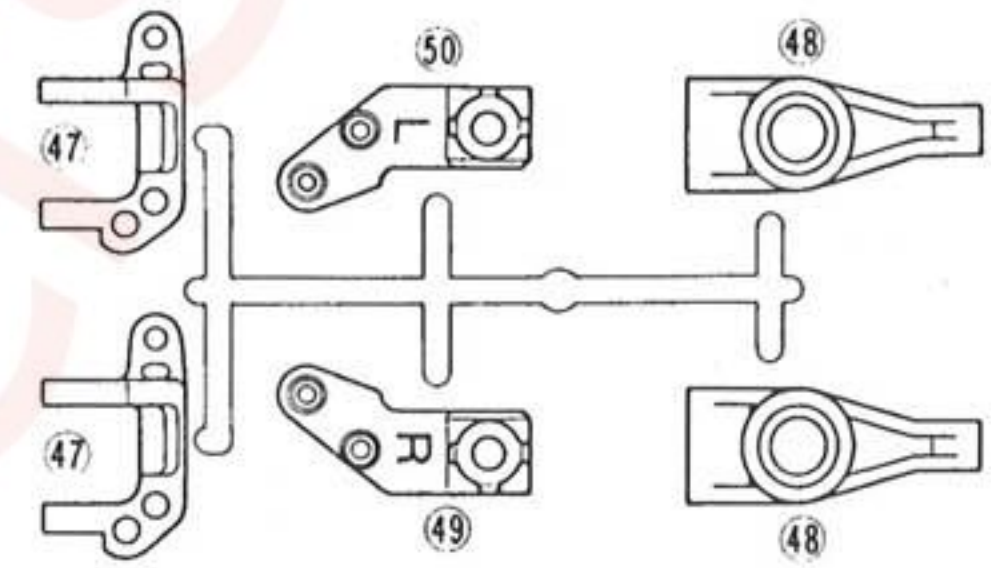


These shaded parts are not used.

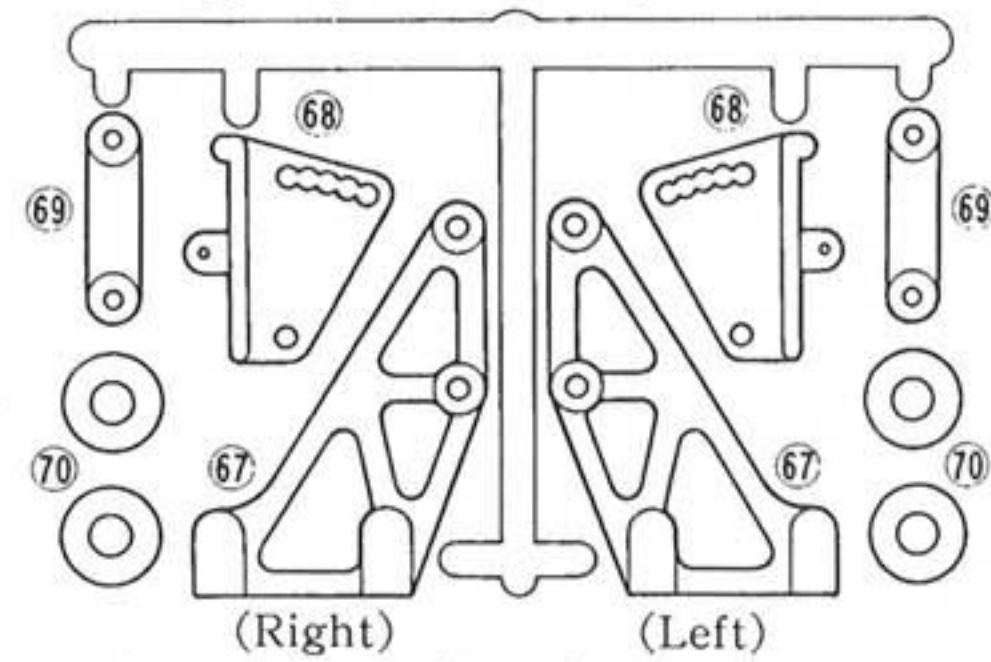
Shock Parts (4 sets)



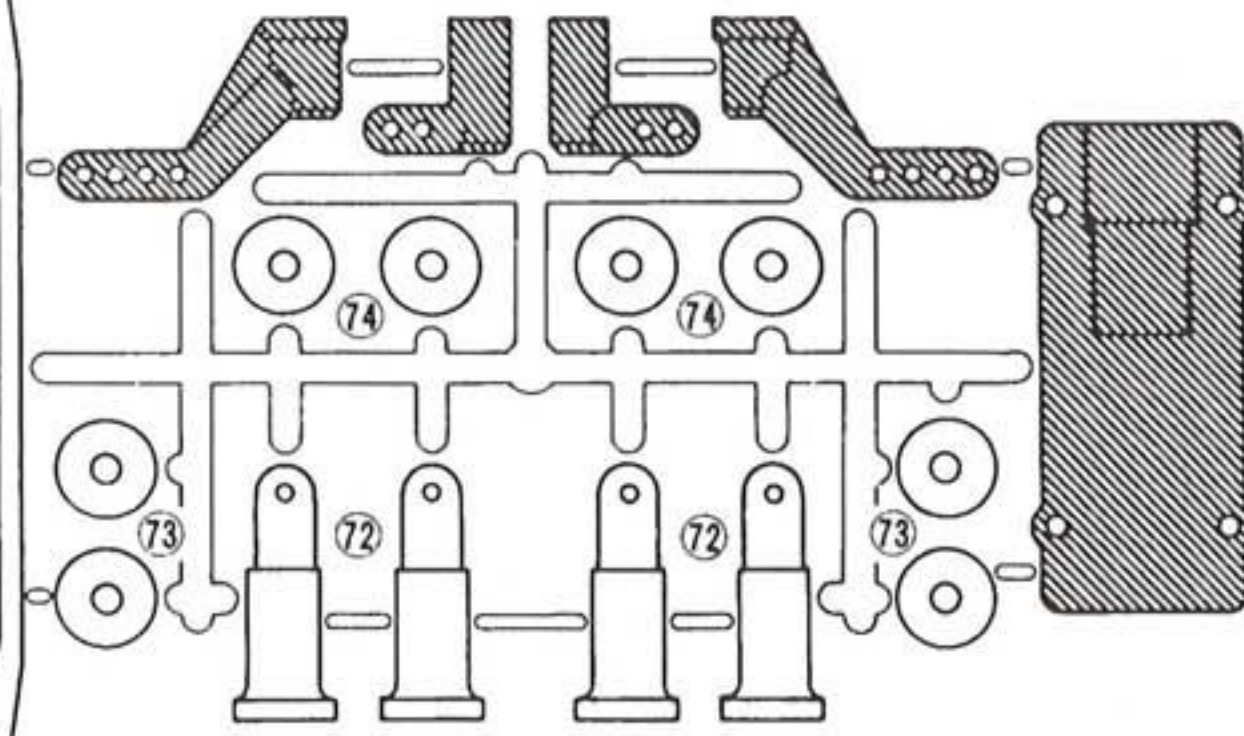
Up Right Parts (1 set)



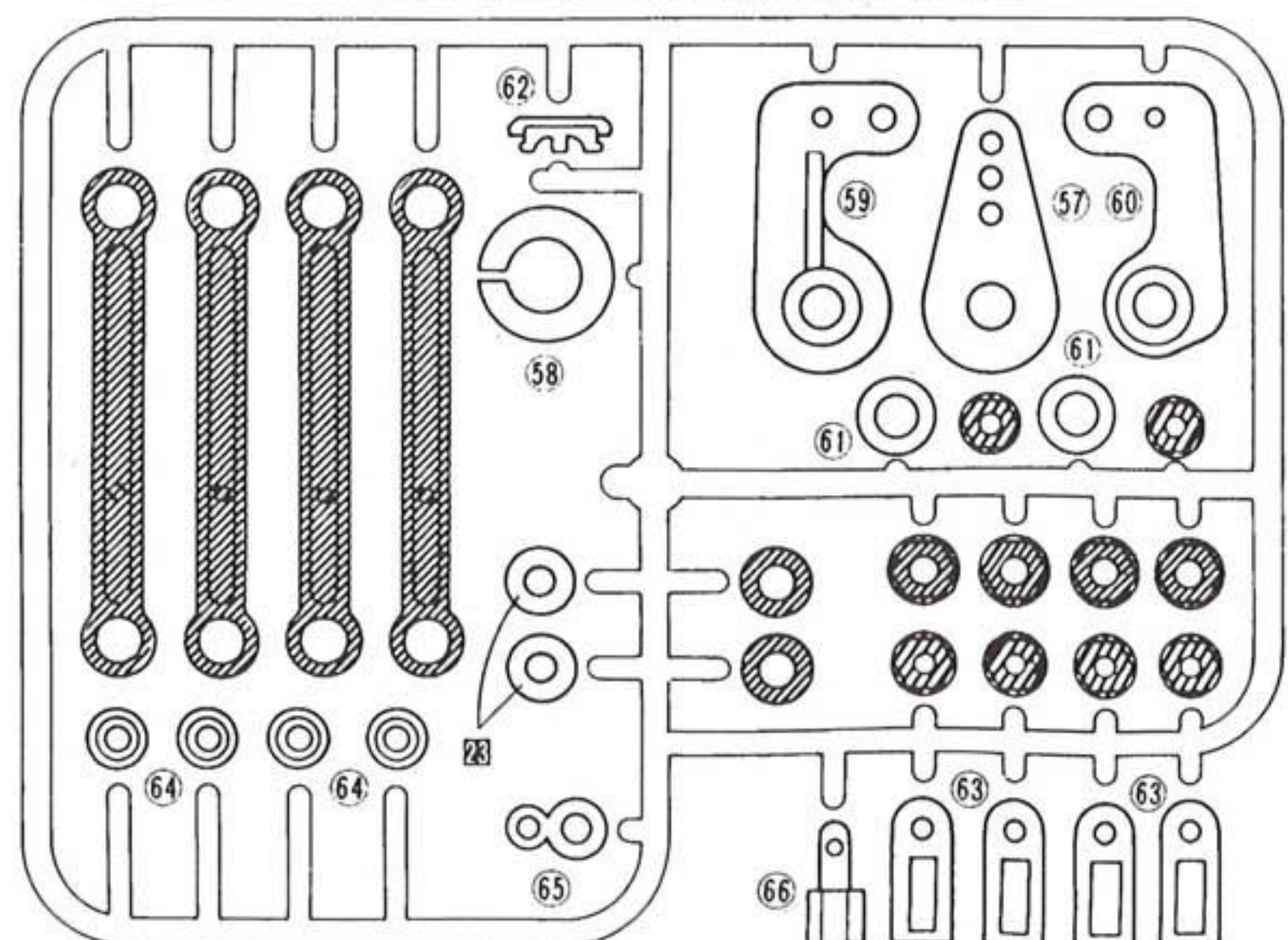
Wing Stay Parts (1 set)



Battery Stopper Parts (1 set)



Servo Saver Parts & others (1 set)

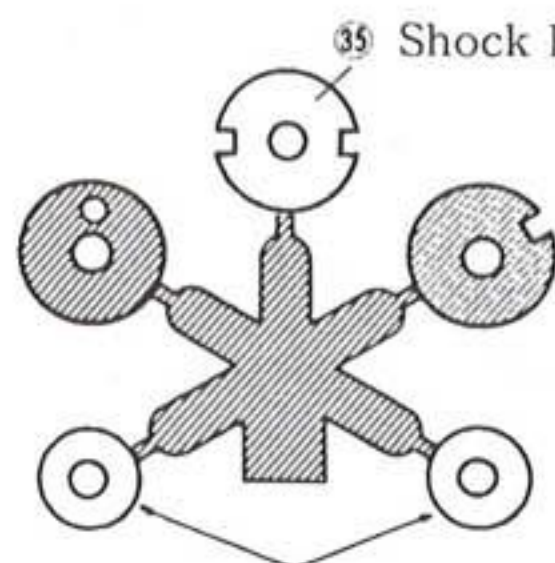


1 ASSEMBLY OF SHOCK

★ These parts used in this step are in bag [UA-5].

2 See page 20 <Basic Setting 1>

* The shaded parts will not be used.



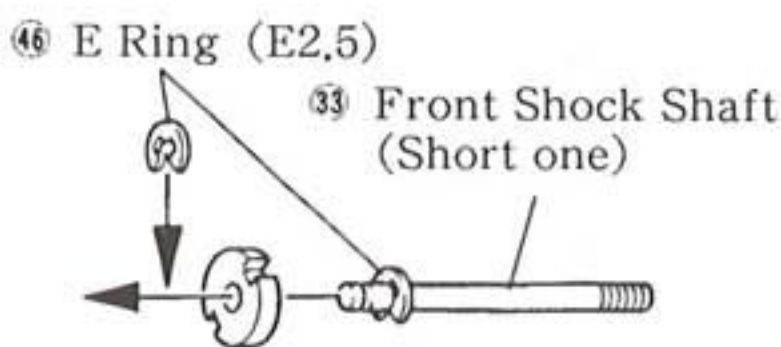
35 Shock Piston

Each 2 pcs. will be used in step 30 and 32.
* When you use large servo... Use in step 22 and 24.

46 E Ring (E2.5) 8

《Front》

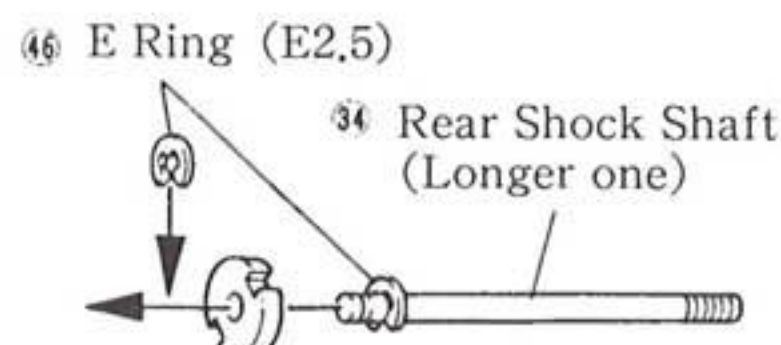
1 Assemble 2 each for the front and the rear.



46 E Ring (E2.5)

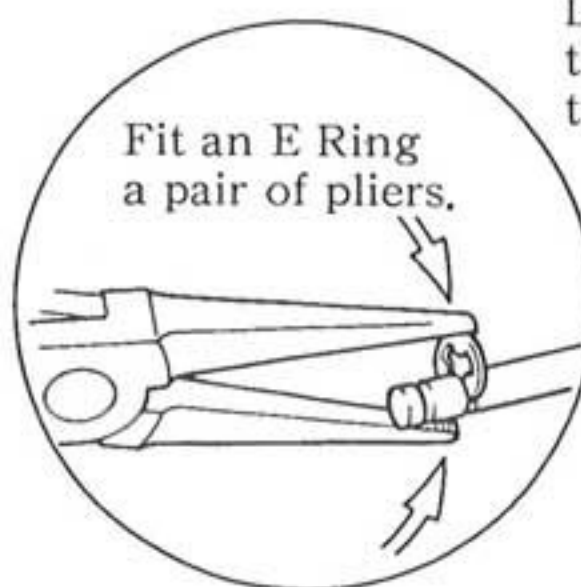
33 Front Shock Shaft (Short one)

《Rear》



46 E Ring (E2.5)

34 Rear Shock Shaft (Longer one)



Fit an E Ring a pair of pliers.

Do not tighten the shock end too tight.



Wrap paper or tape around shaft to prevent pliers from marking it.

39 Front Shock Case (Shorter one)

40 Rear Shock Case (Longer one)

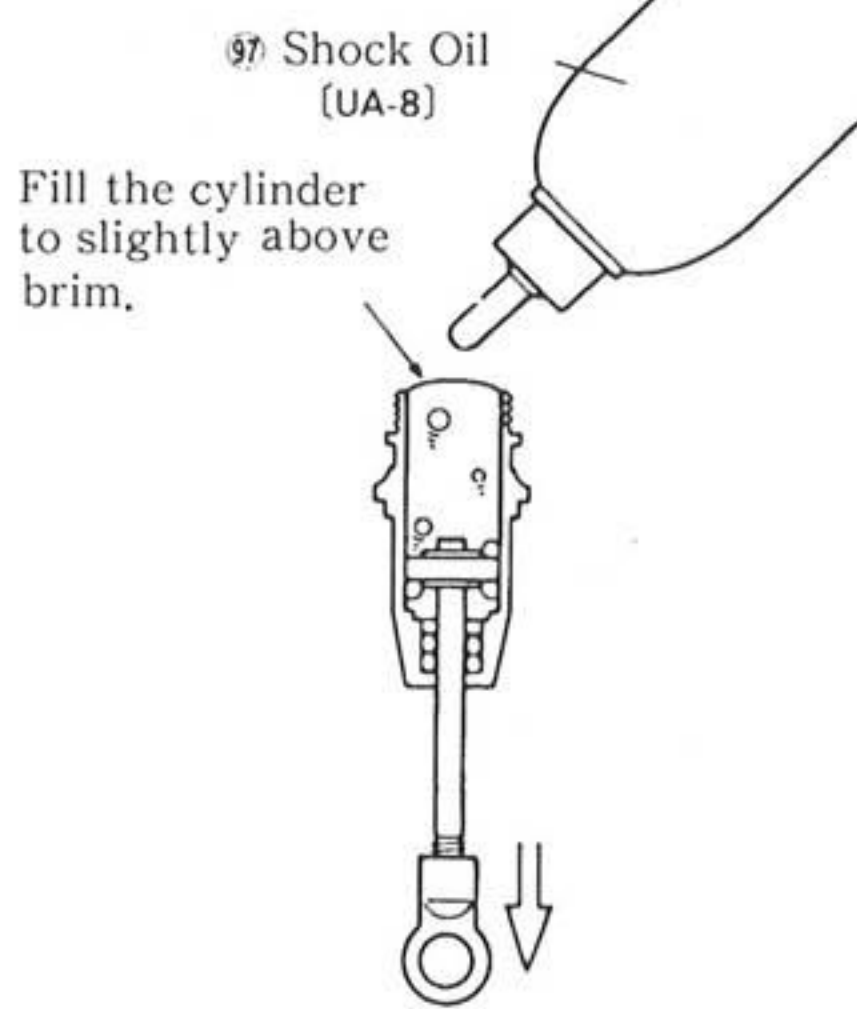
Be sure to install a rod of correct length in the front and rear shocks.

2 FILLING OF SHOCK

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.

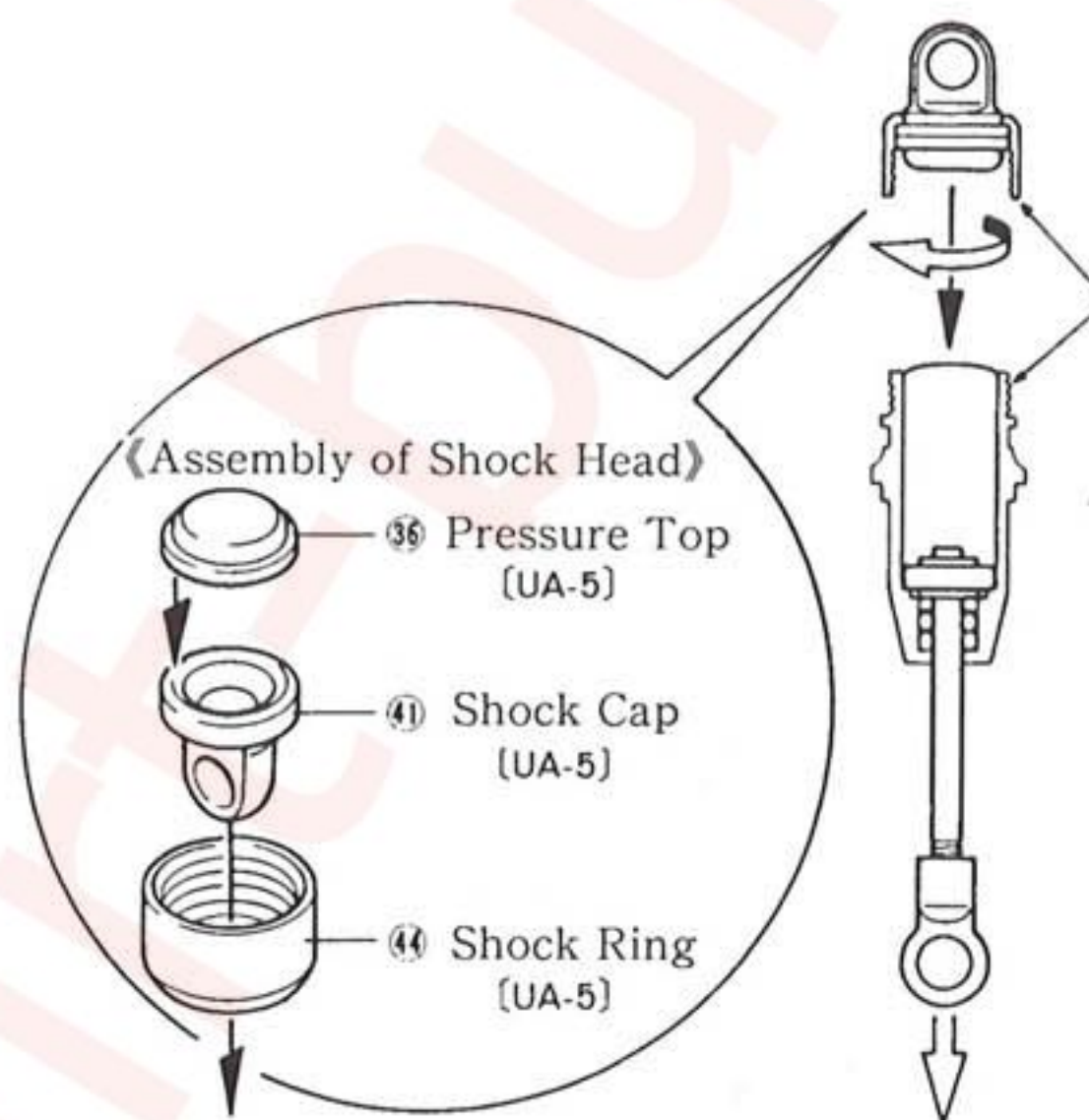
2 Keep the piston in the lowest position and tight shock ring gradually, then excessive oil will run over.

3 It should move without any binding.



37 Shock Oil (UA-8)

Fill the cylinder to slightly above brim.



《Assembly of Shock Head》

36 Pressure Top (UA-5)

41 Shock Cap (UA-5)

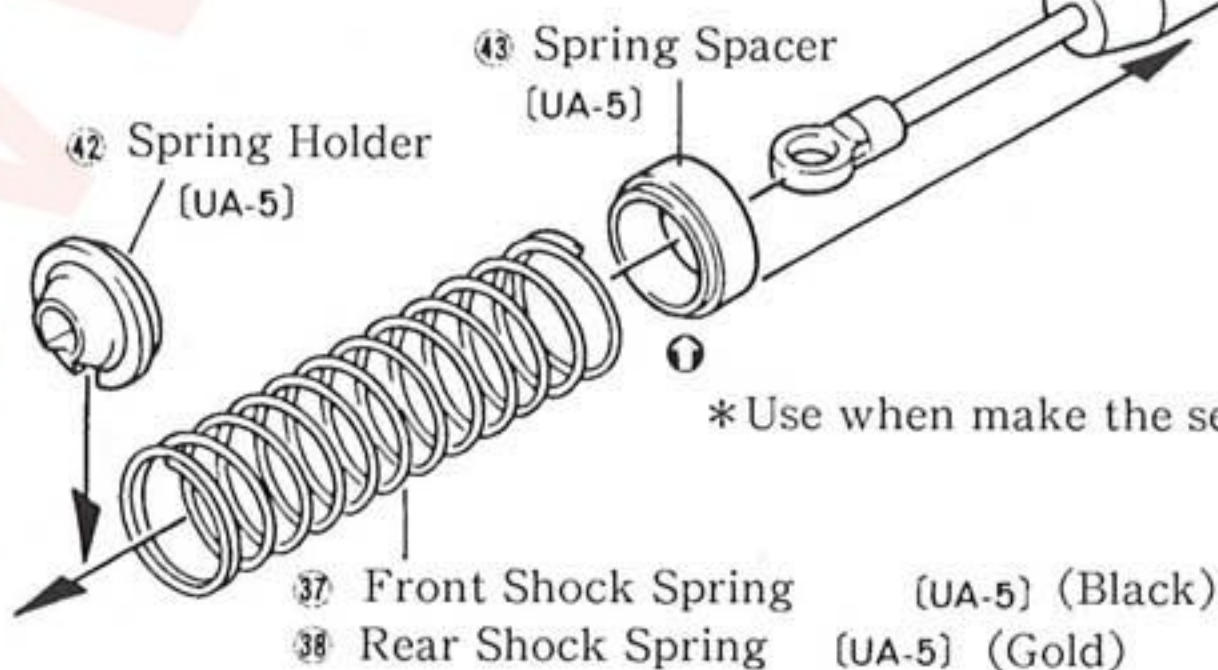
44 Shock Ring (UA-5)

In the end, tighten it firmly so that the oil will not leak out.

Confirm that it will work smoothly by moving the piston up and down.

3 5.8 φ Ball (Silver) 2

4



42 Spring Holder (UA-5)

43 Spring Spacer (UA-5)

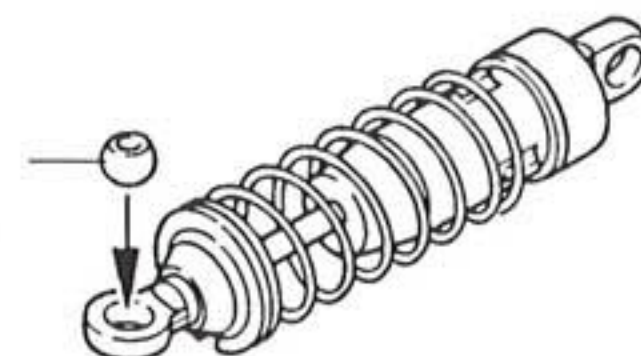
37 Front Shock Spring (UA-5) (Black)

38 Rear Shock Spring (UA-5) (Gold)

* Use when make the setting hard.

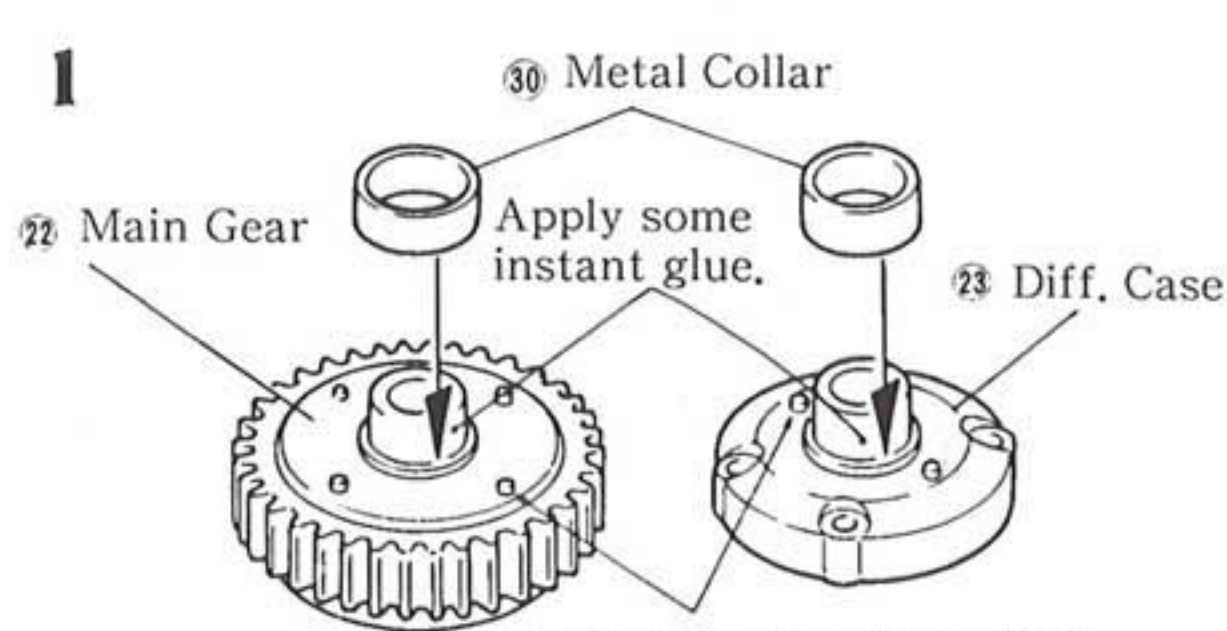
5

3 5.8 φ Ball (Silver) (UA-2)



* Push in the 5.8 φ Ball only for the front.

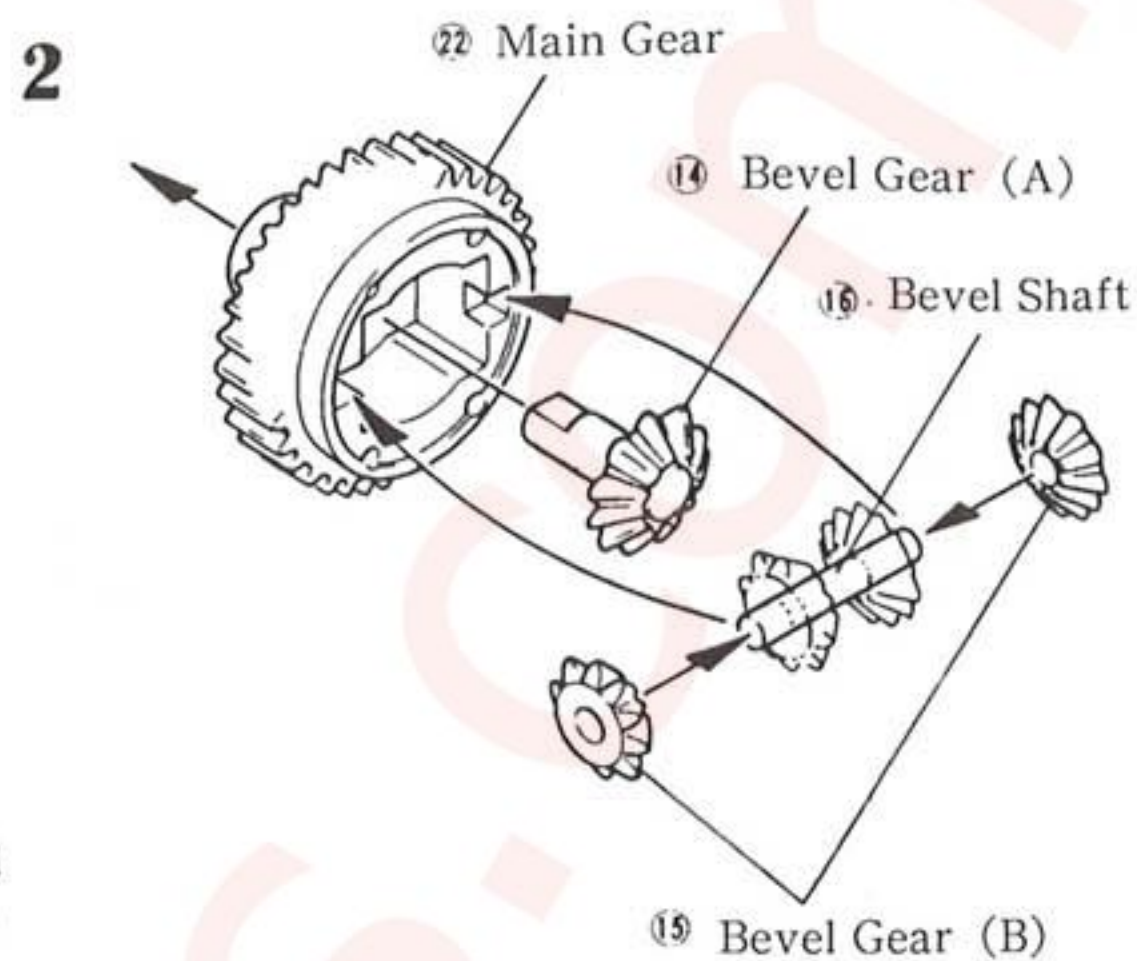
3 ASSEMBLY OF DIFF. GEAR



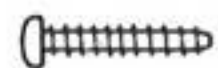
Remove the excess flash with a hobby knife.



If the optional ball bearings are going to be used do not cement the metal collars to the diff. case. The bearings will be installed in step 4.



M2x10 TP RH Screw 4



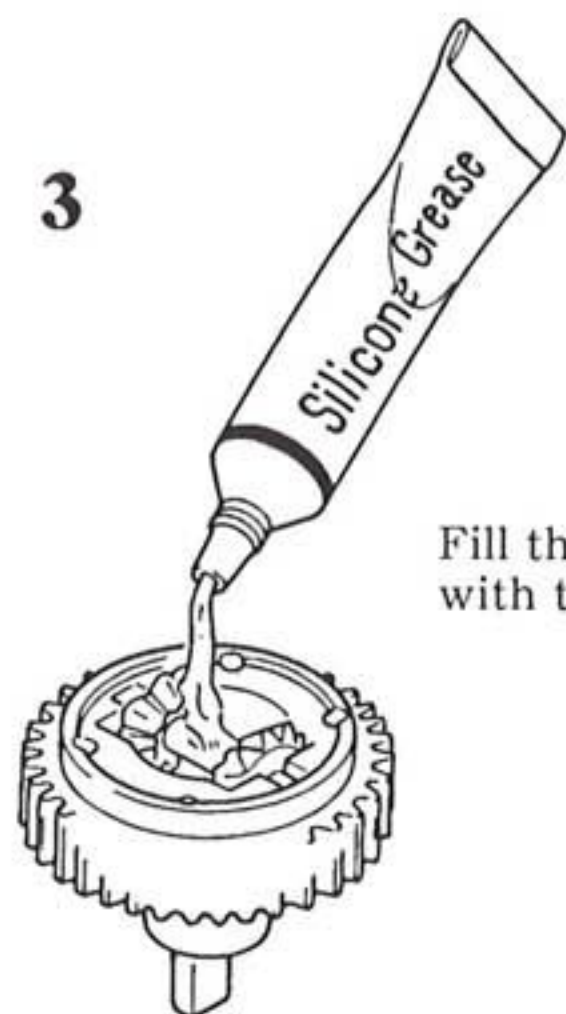
16 Bevel Shaft 1



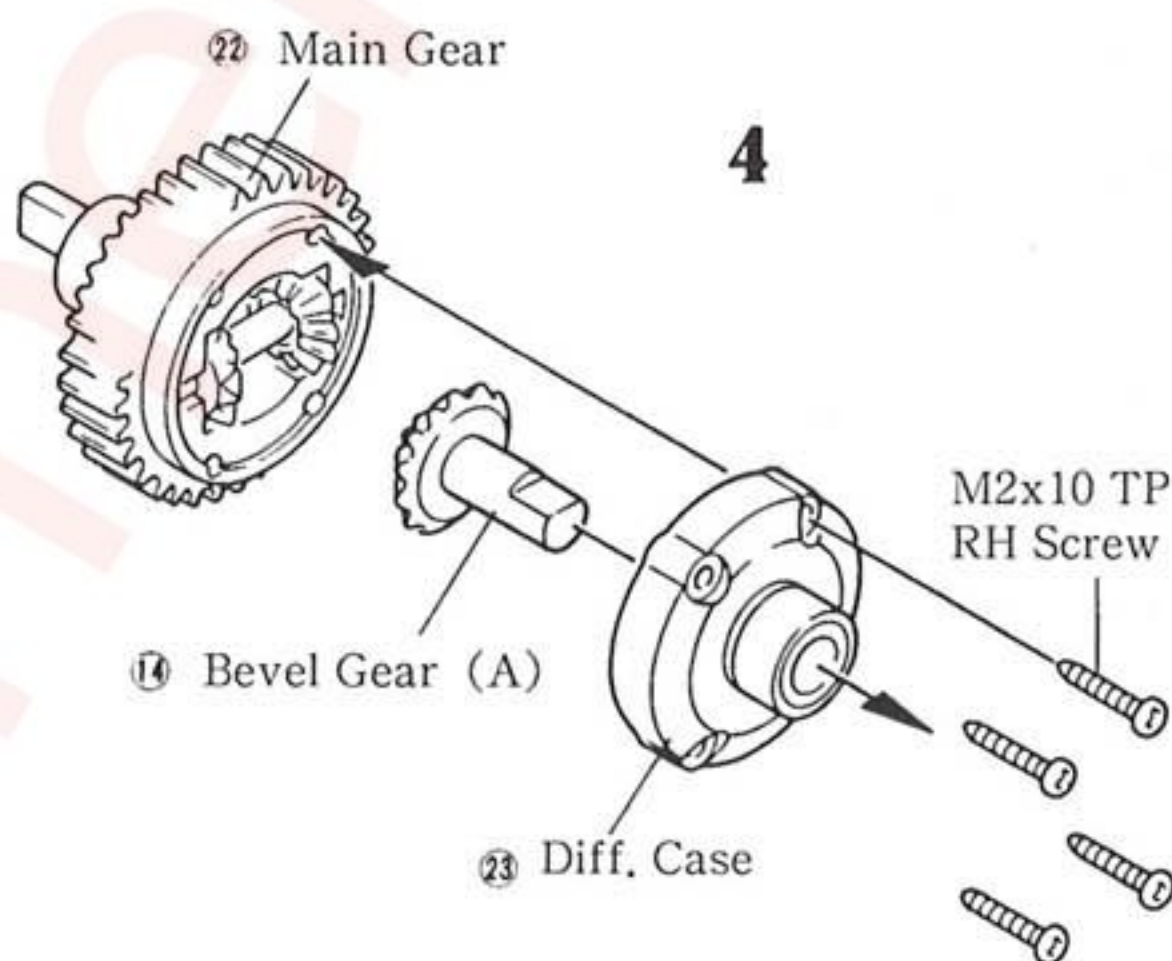
30 Metal Collar 2



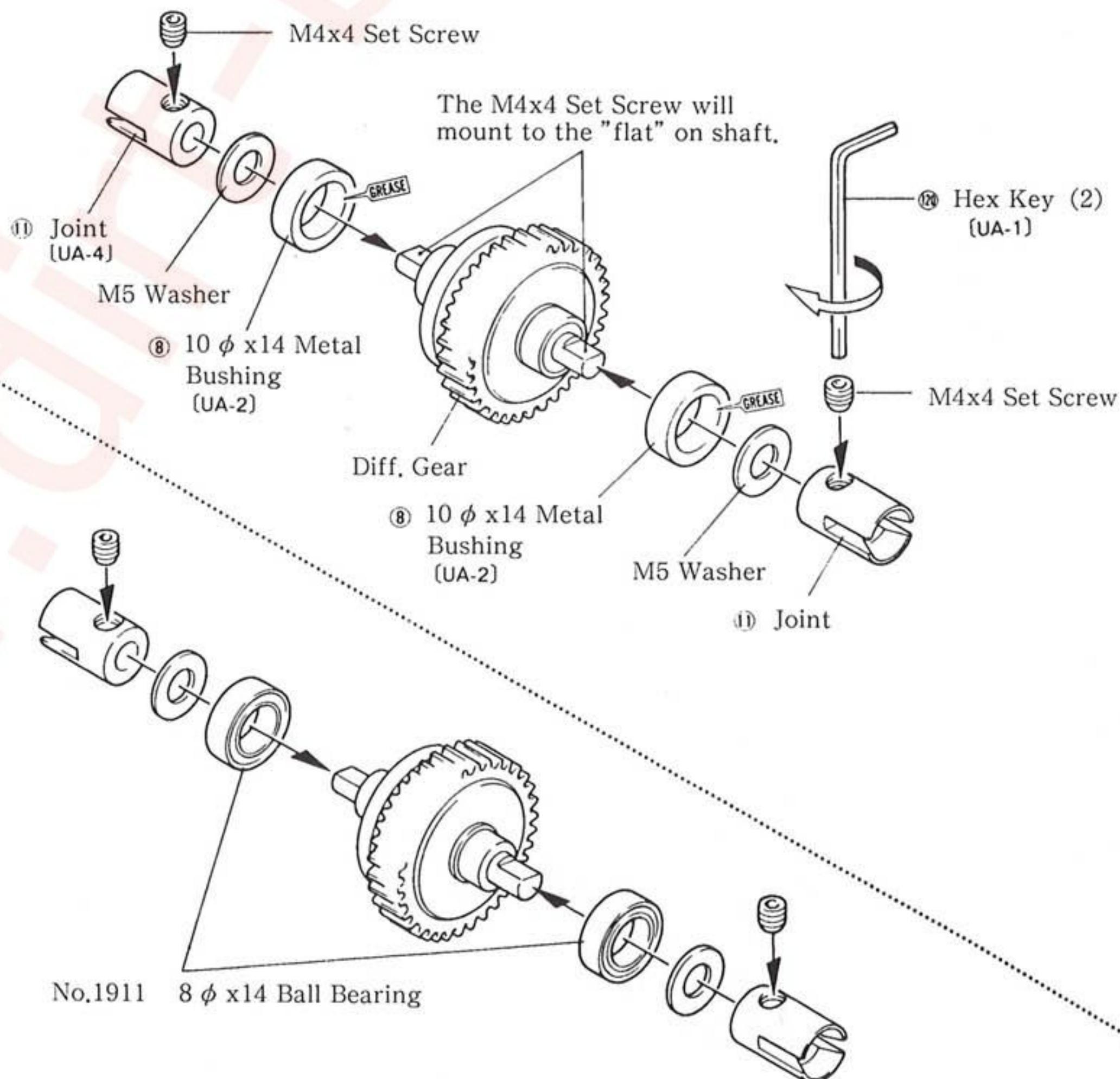
3



Fill the gear case with the silicone grease.



4 INSTALLATION OF JOINT



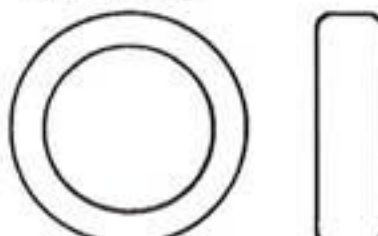
M4x4 Set Screw 2



M5 Washer 2



8 10 φ x14 Metal Bushing 2*

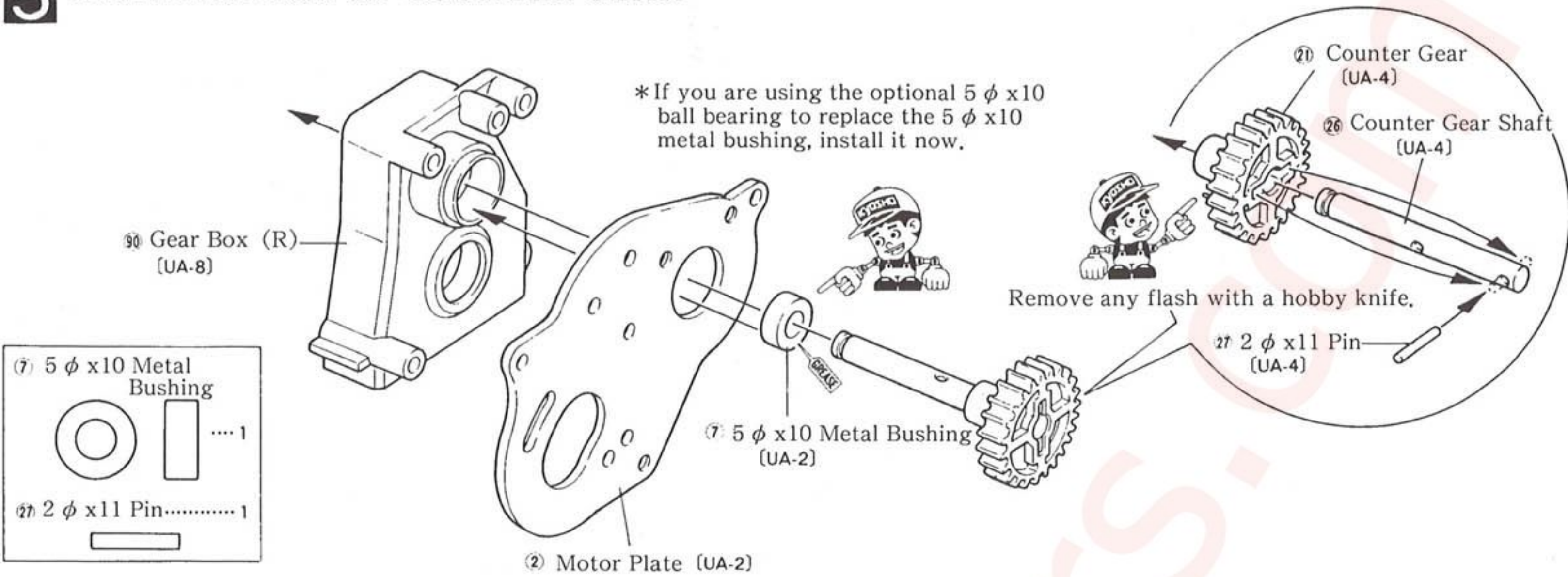


《 OPTION 》

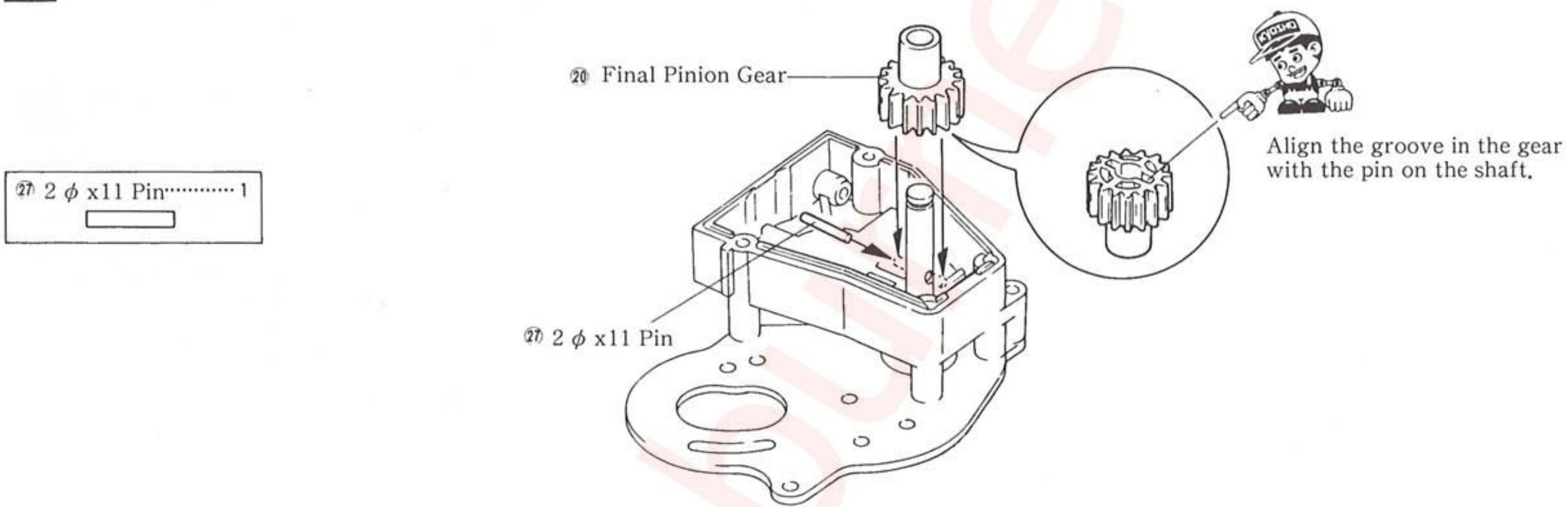
If you are using the optional ball bearings, install them as shown.

No.1911 8 φ x14 Ball Bearing

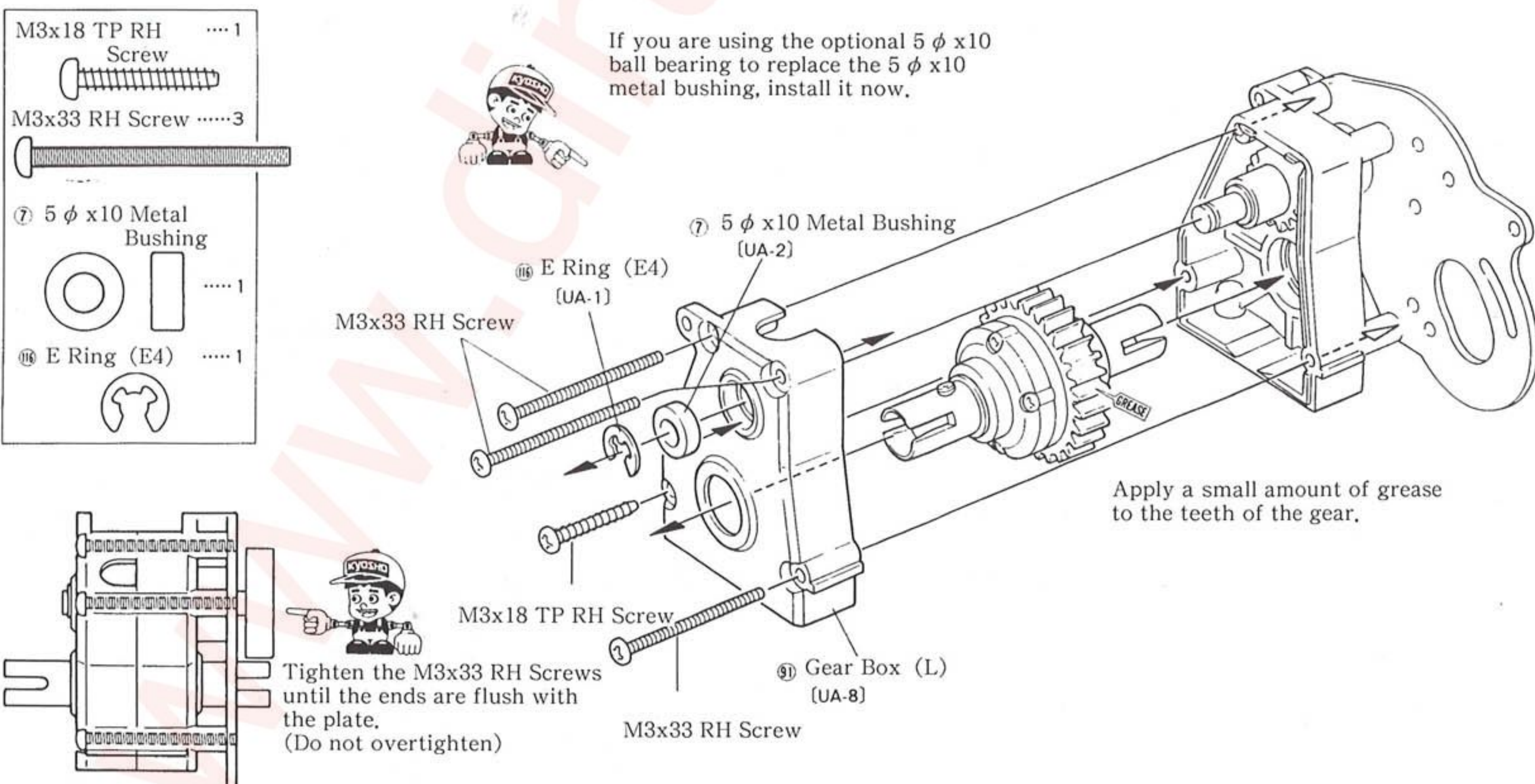
5 INSTALLATION OF COUNTER GEAR



6 INSTALLATION OF FINAL PINION GEAR



7 ASSEMBLY OF GEAR BOX

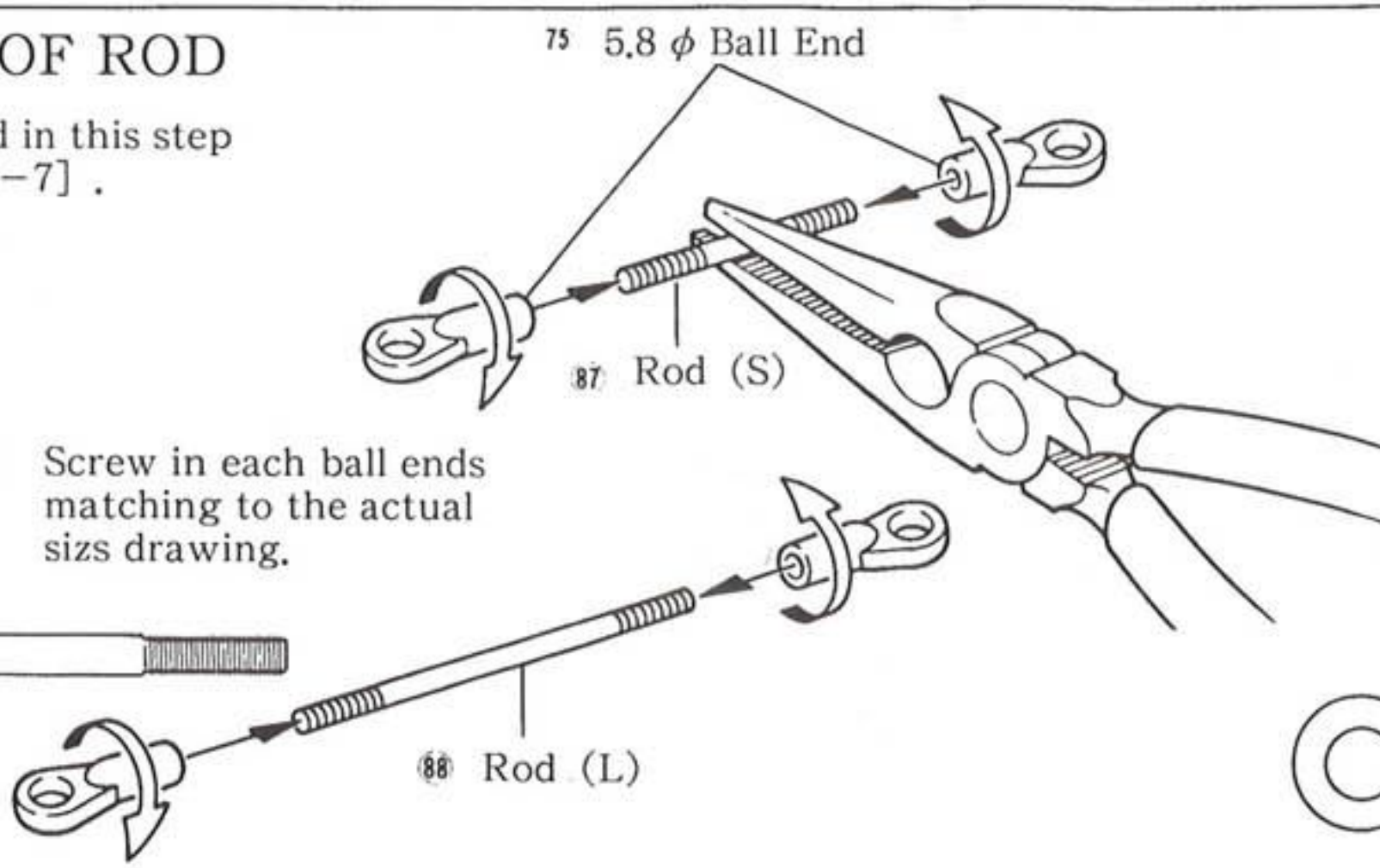


8 ASSEMBLY OF ROD

★ These parts used in this step are in bag [UA-7].

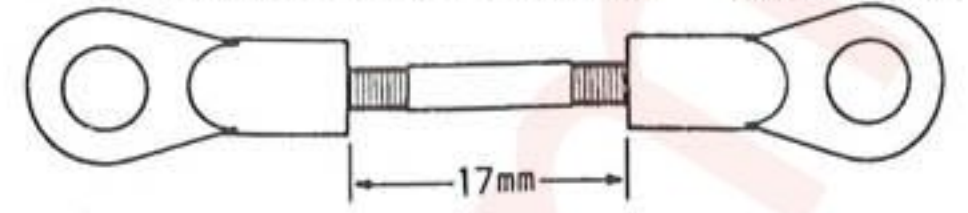
75 5.8 φ Ball End	12
87 Rod (S)	4
88 Rod (L)	2

Screw in each ball ends matching to the actual sizes drawing.

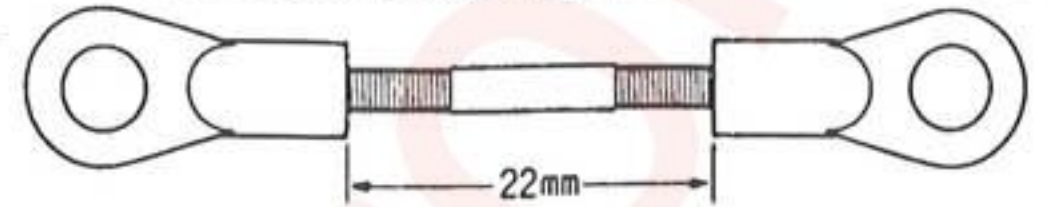


《 Actual Size Drawing 》

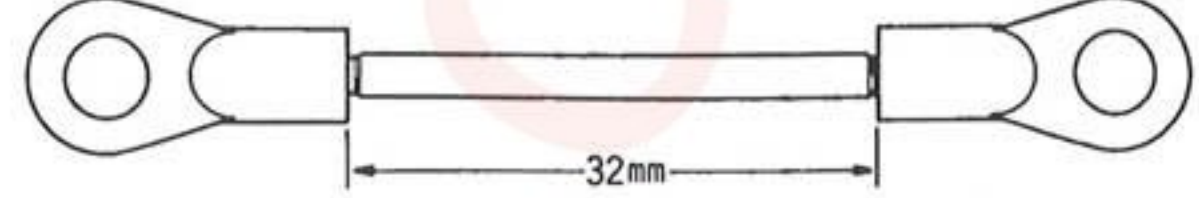
● Front Upper Rod ... 2 sets Use in step 17



● Rear Upper Rod ... 2 sets Use in step 9

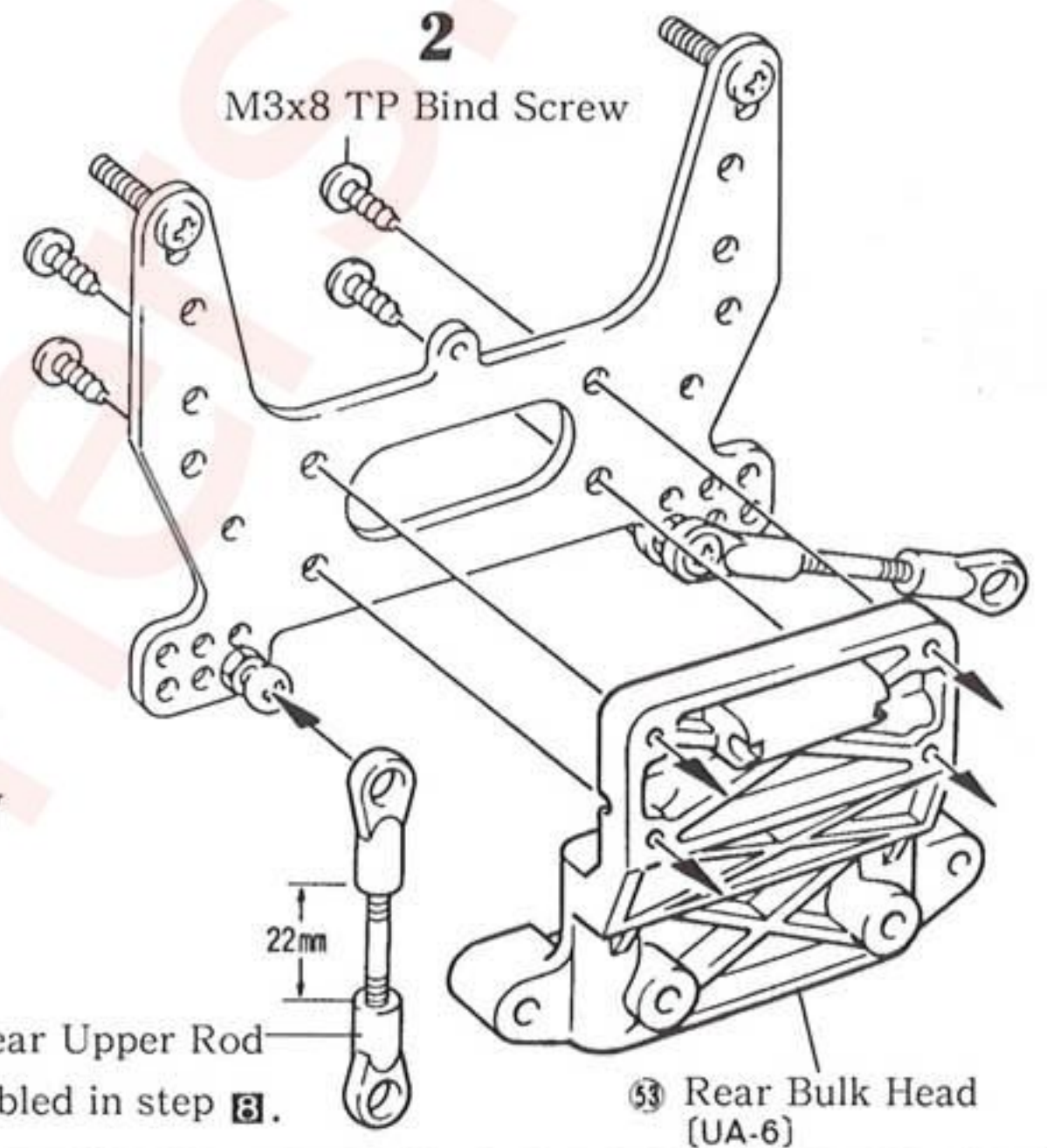
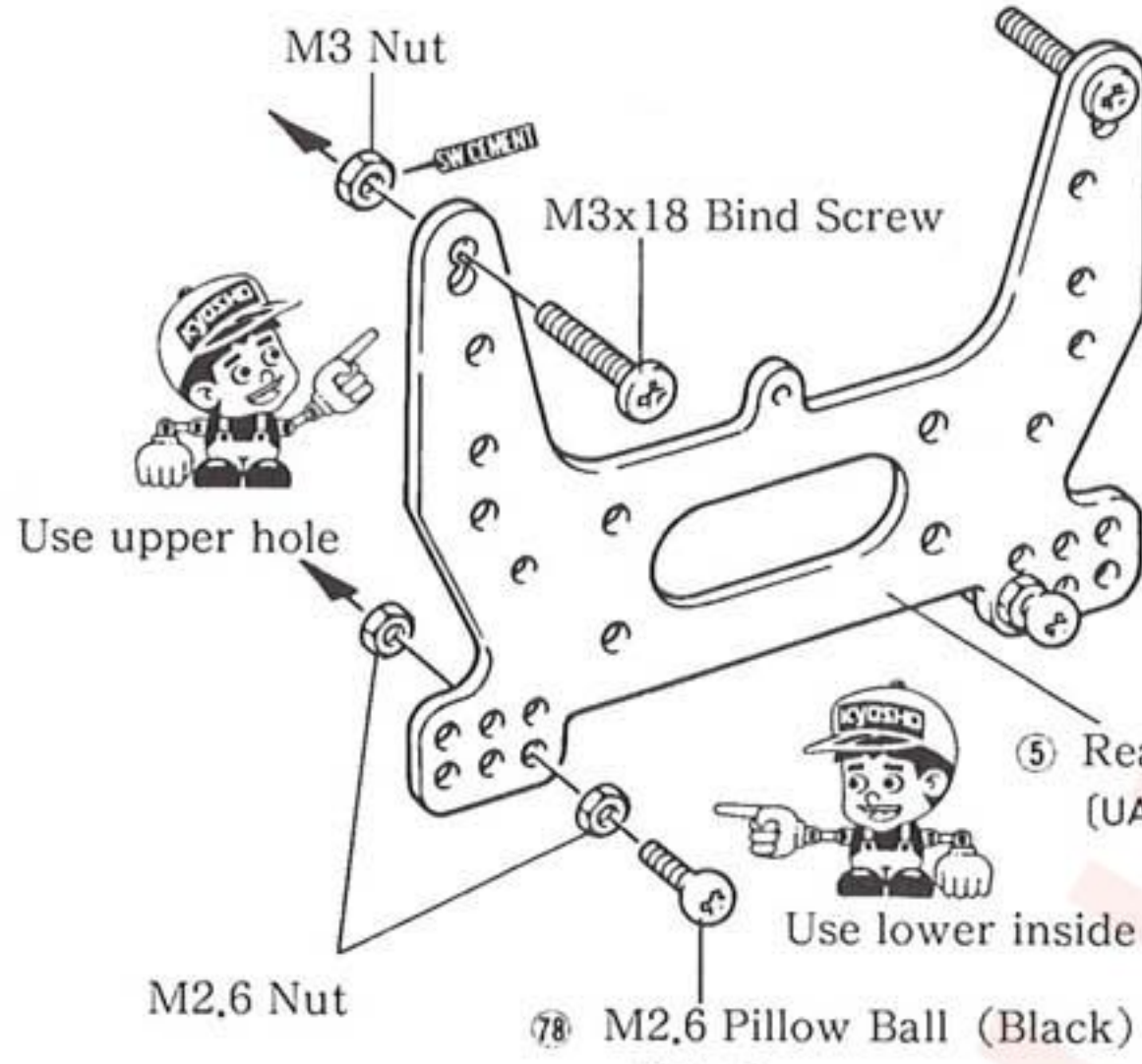


● Tie Rod ... 2 sets Use in step 19



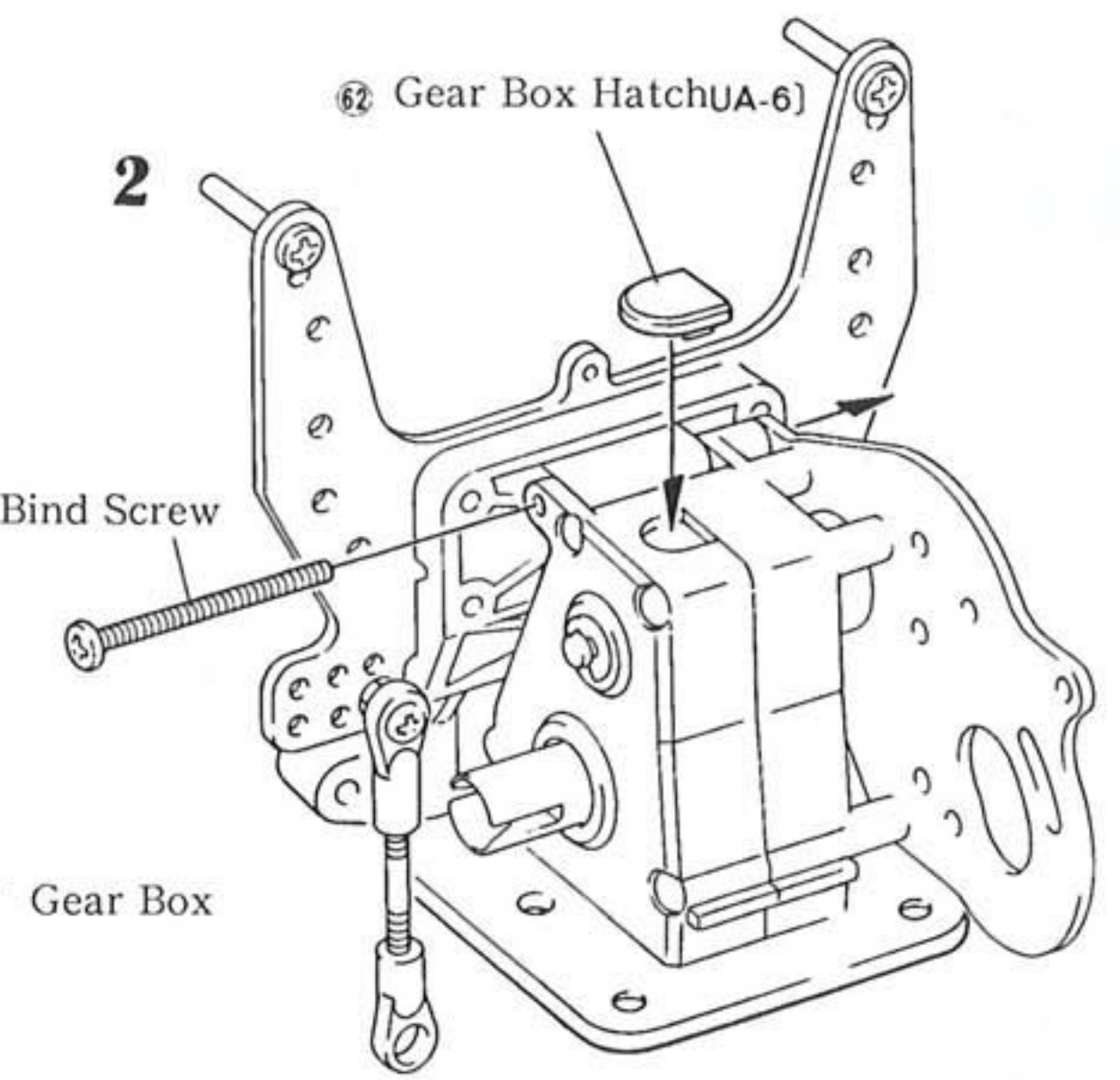
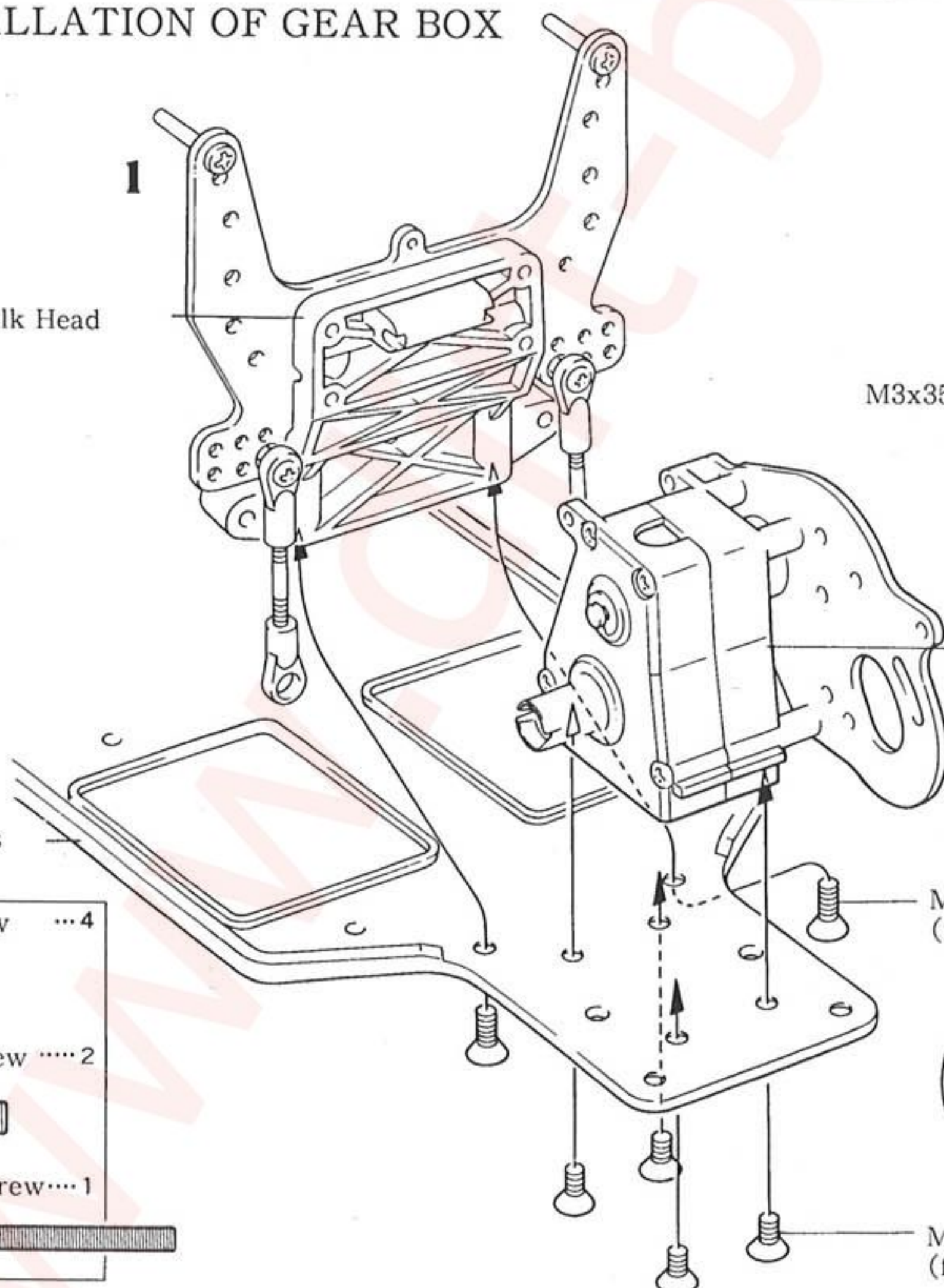
9 INSTALLATION OF REAR SHOCK STAY 1

M3x8 TP Bind Screw	4
M3x18 Bind Screw	2
M2.6 Nut	4
M3 Nut	2
78 M2.6Pillow Ball (Black)	2



10 INSTALLATION OF GEAR BOX

M4x8 FH Screw	4
M4x12 FH Screw	2
M3x35 Bind Screw	1



M4x12 FH Screw ... 2 pcs. (for fixing the bulk head)

M4x4 FH Screw ... 4 pcs. (for fixing the gear box)

Fix these six FH Screw temporarily. Permanently tighten in step 17.

Leave the clearance of 2mm here.

11 INSTALLATION OF REAR HUB

(12) Rear Wheel Shaft (UA-4) (When screw in the pillow ball...)

(48) Rear Hub (UA-6)

(13) Drive Washer (UA-4)

Tighten temporarily.
M4 Nylon Nut (Flanged)

If you are using the optional ball bearings, install them now.
Replace 5 φ x10 Metal Bushings with 5 φ x10 Ball Bearings.
* (No.1901)

(7) 5 φ x10 Metal Bushing (UA-2)

(79) M3 Pillow Ball (UA-7) (Silver)

(1) Sus. Shaft (B) (UA-2)

(36) Rear Sus. Arm (UA-6)

(80) Sus. Shaft (A) (Silver) (UA-7)

(46) E Ring (E2.5) (UA-1)

Leave the clearance of 1mm.

(79) M3 Pillow Ball (UA-7) (Silver)

(Right)

(Left)

Be careful about the direction of sus. arm.

Parts List:

- (7) 5 φ x10 Metal Bushing 4
- (80) Sus. Shaft (A) (Black) 2
- (1) Sus. Shaft (B) 2
- (46) E Ring (E2.5) 2
- M4 Nylon Nut 2
- Flanged

12 INSTALLATION OF REAR SUS. ARM

M4x8 FH Screw 2

After the rear sus. arm has been installed, permanently tighten the 6 FH Screws which were temporarily tightend in step 11.

(18) Swing Shaft (UA-4)

(52) Rear Axle Stopper (UA-6)

M4x8 FH Screw

(Right)

(Left)

Parts List:

- M4x8 FH Screw 2

13 INSTALLATION OF KNUCKLE ARM

(78) M2.6 Pillow Ball (Black) (UA-7)

(115) E Ring (E3) (UA-1)

(47) Front Hub (UA-6)

(79) M3 Pillow Ball (UA-7) (Silver)

(83) King Pin (UA-7)

(25) Front Wheel Shaft (UA-4)

(49) Knuckle Arm (R) (UA-6)

(50) Knuckle Arm (L) (UA-6)

(23) Front Wheel Shaft (UA-4)

Outer hole

GREASE

GREASE

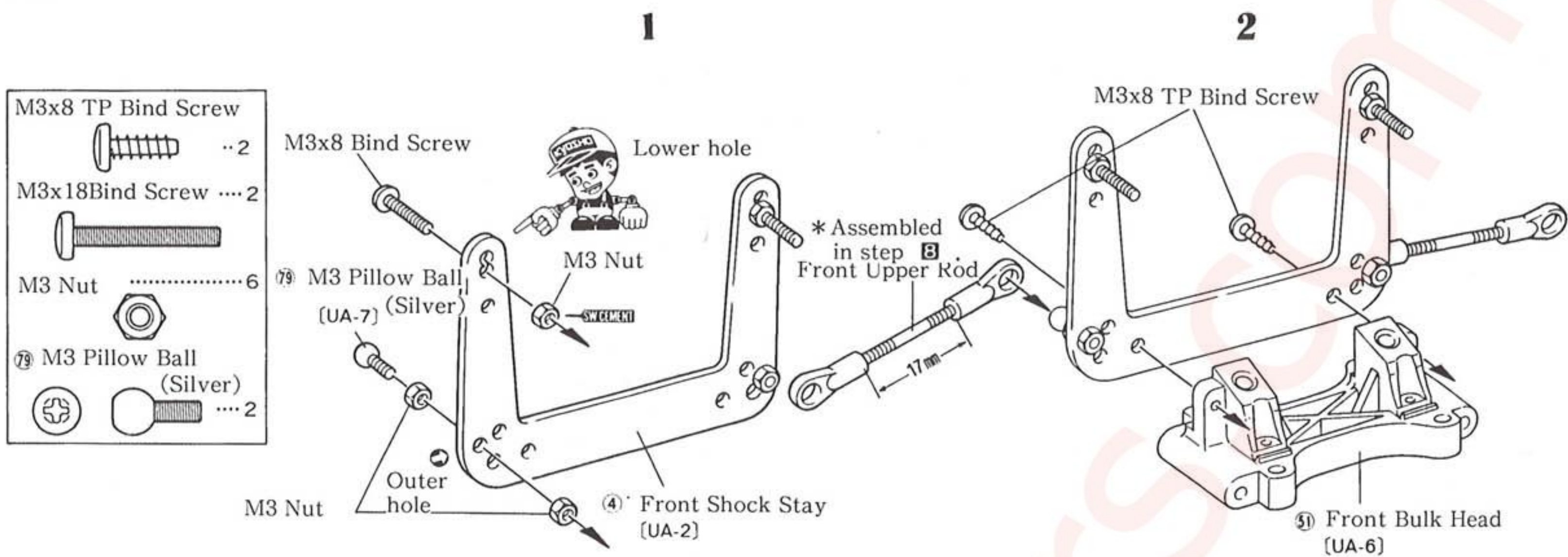
(Left)

(Right)

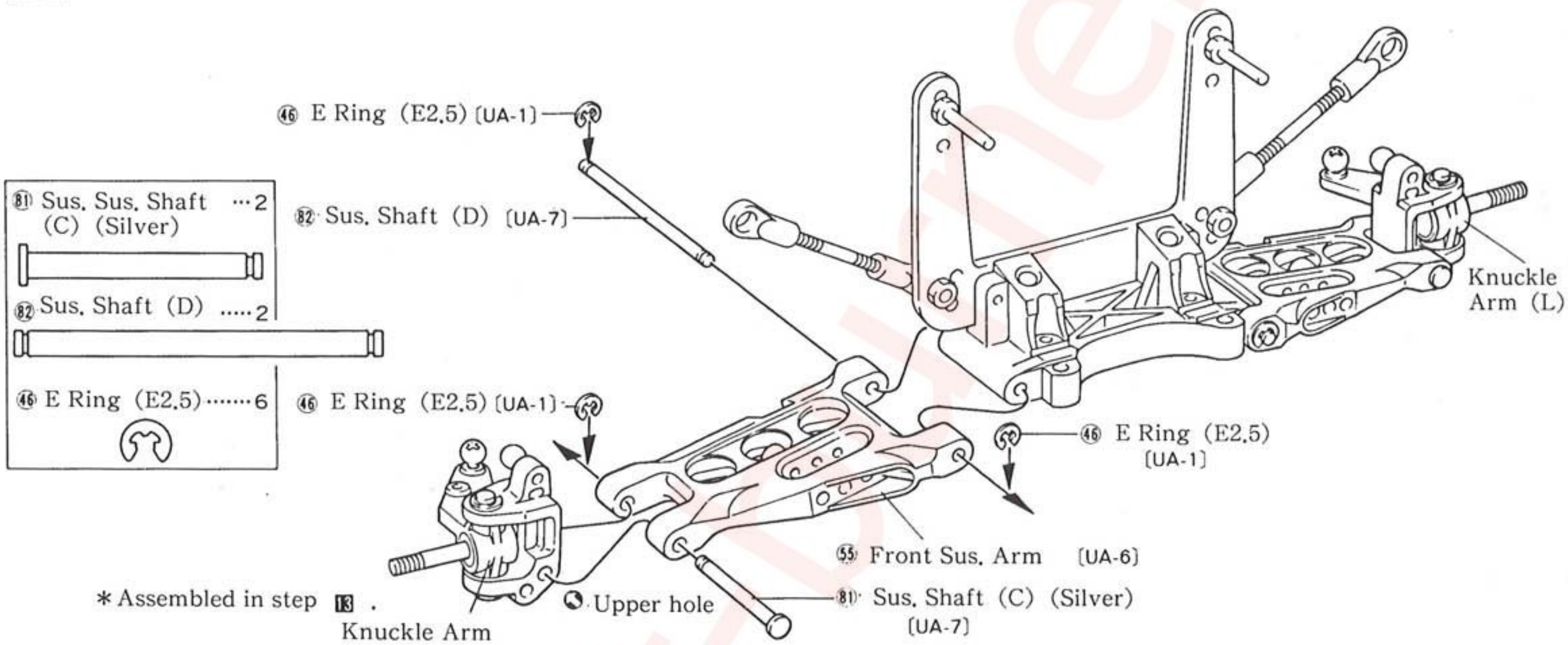
Parts List:

- (78) M2.6 Pillow Ball ... 2 (Black)
- (79) M3 Pillow Ball ... 2 (Silver)
- (83) King Pin 2
- (115) E Ring (E3) 2

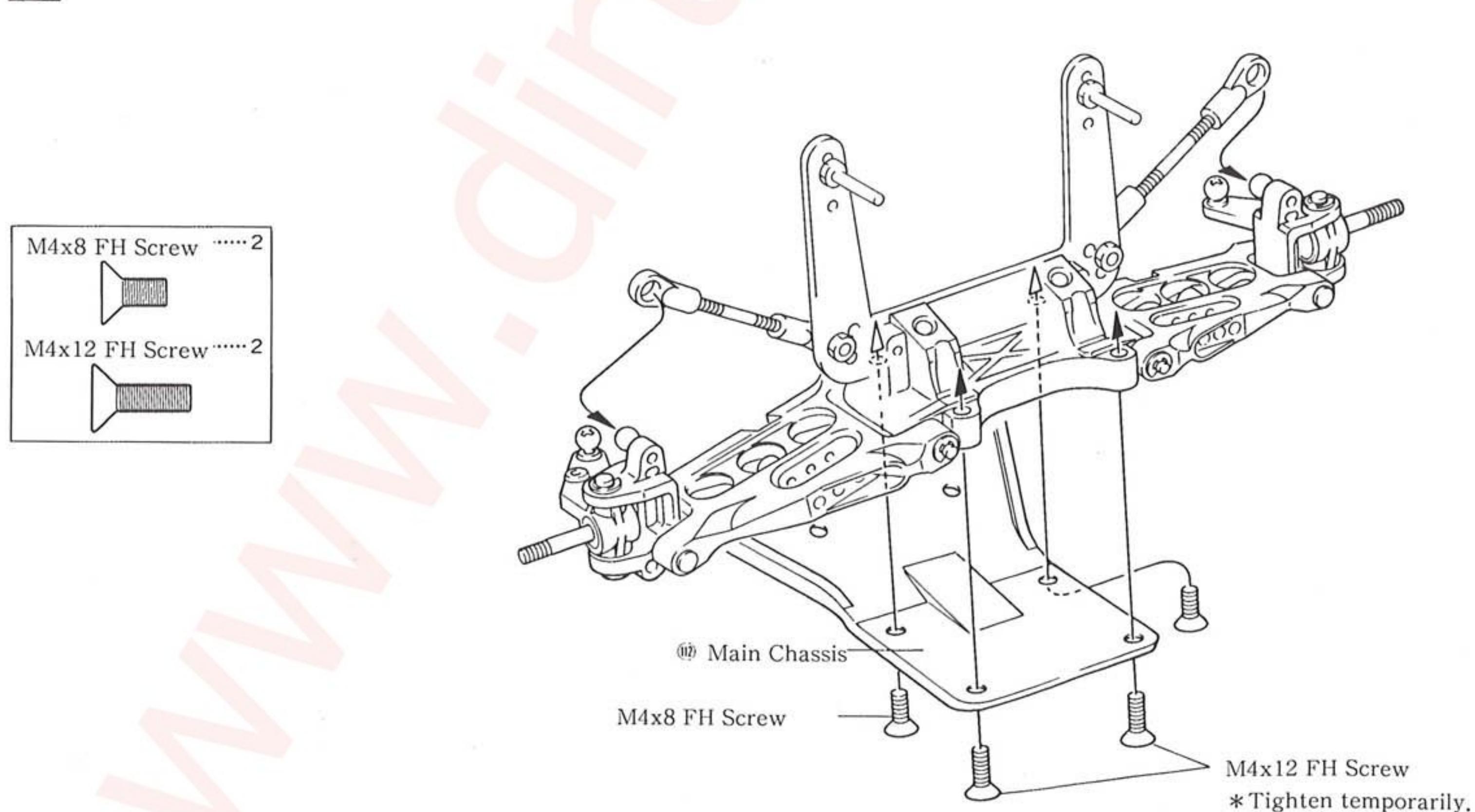
14 INSTALLATION OF FRONT SHOCK STAY



15 INSTALLATION OF FRONT SUS. ARM

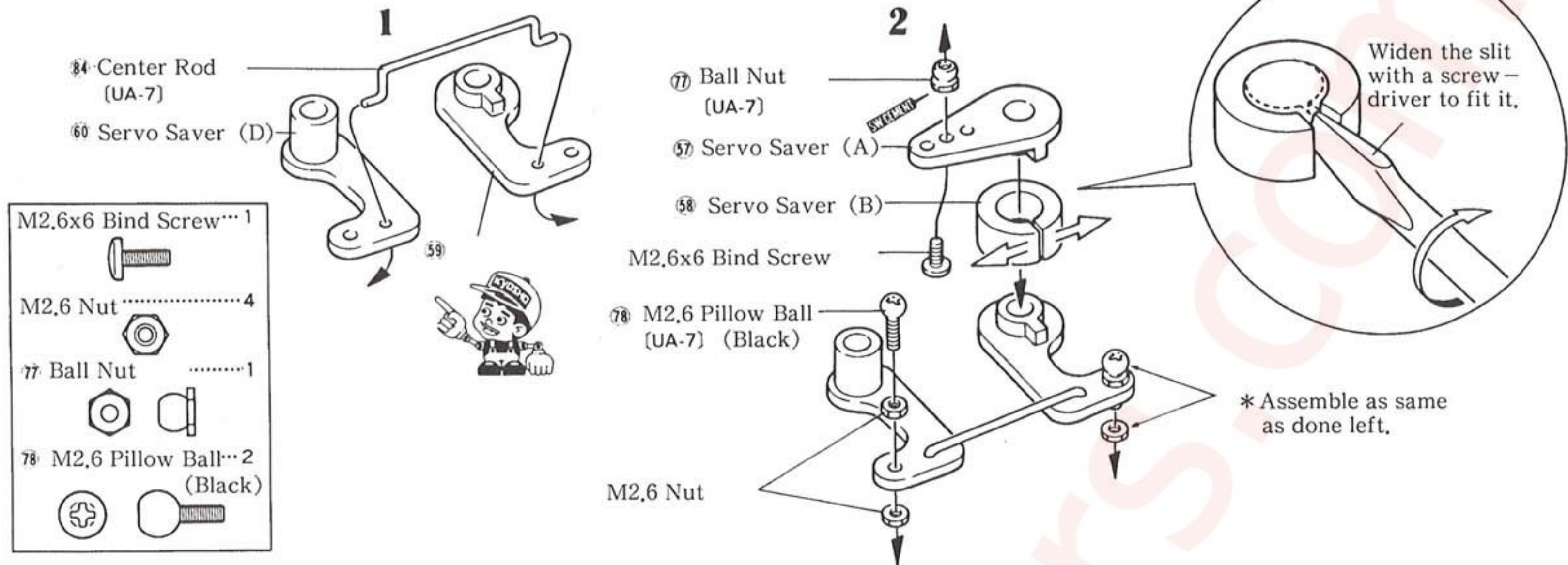


16 INSTALLATION OF FRONT BULK HEAD

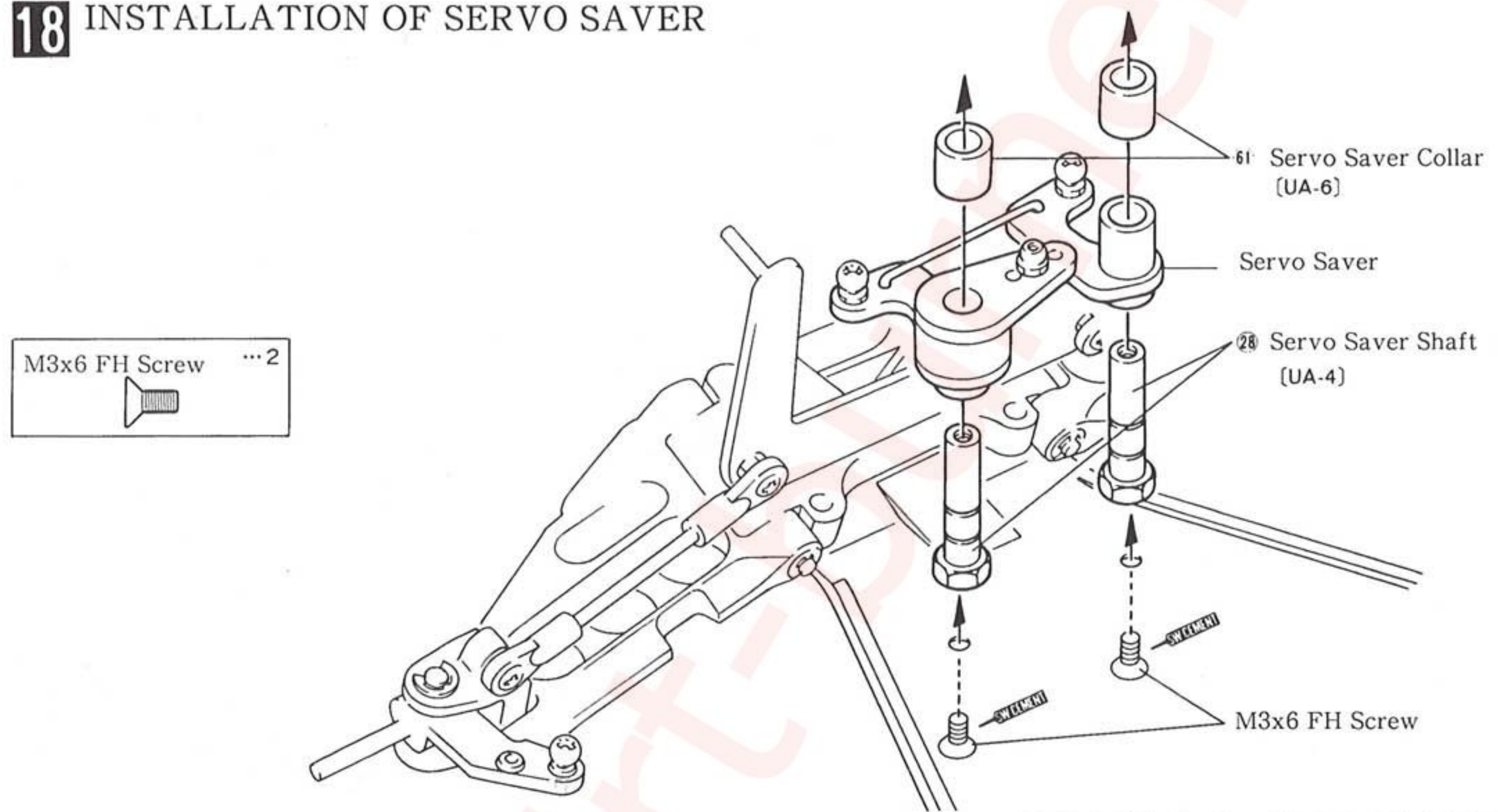


17 ASSEMBLY OF SERVO SAVER

★ These plastic parts 57 ~ 60 are in bag [UA-6].

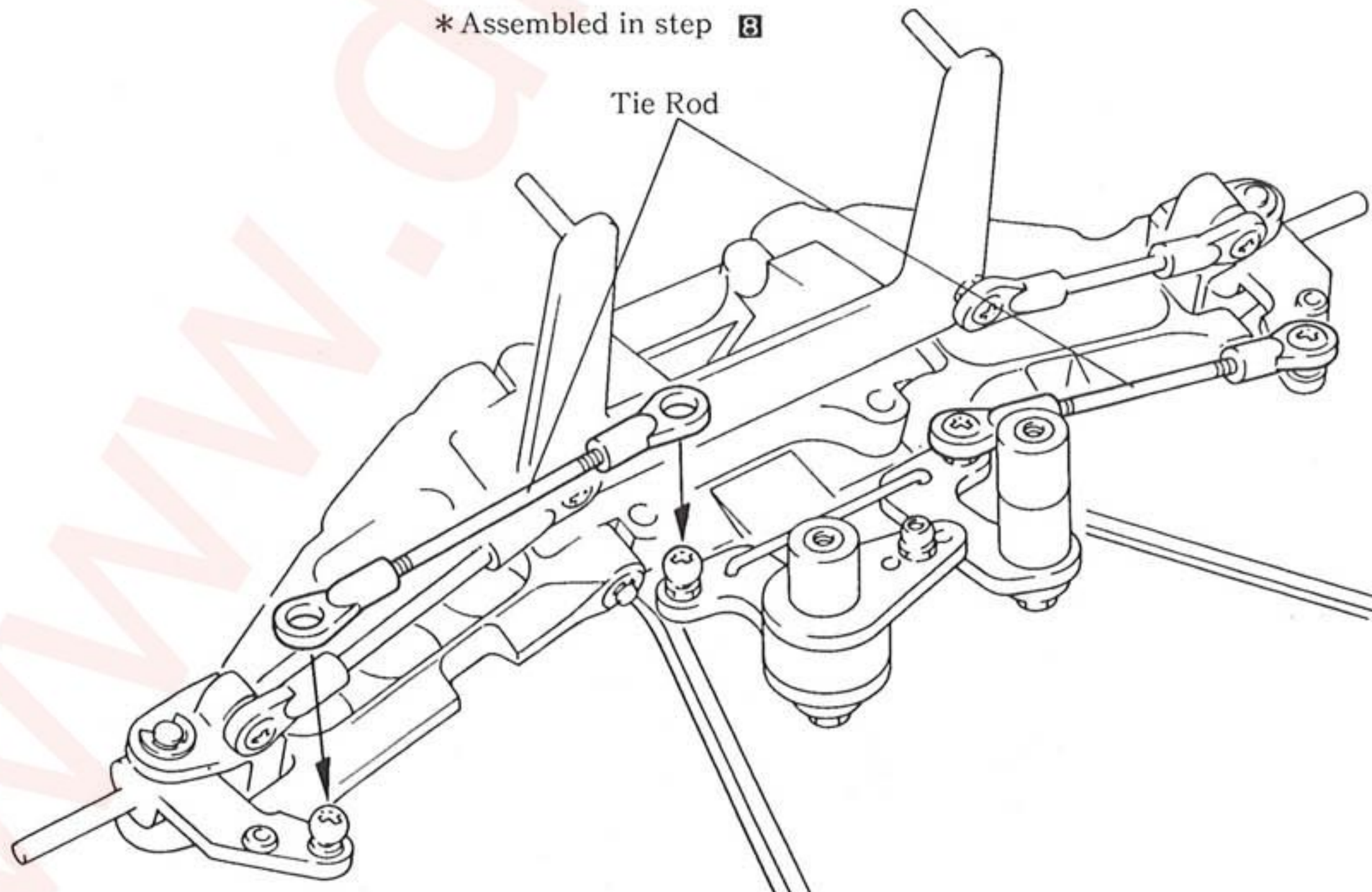


18 INSTALLATION OF SERVO SAVER

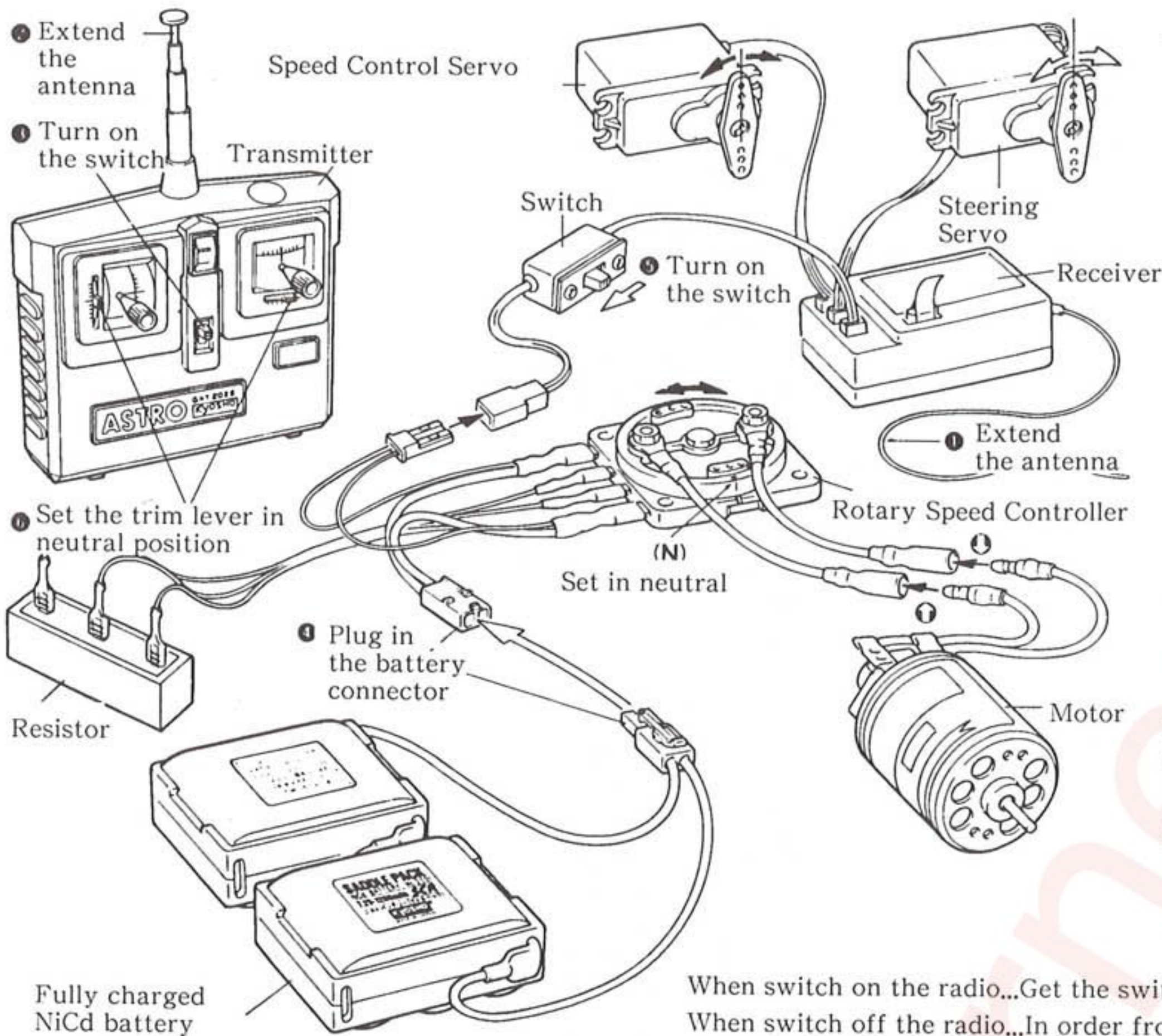


19 INSTALLATION OF TIE ROD

* Assembled in step 8



20 HOW TO CHECK RADIO UNIT



This model is designed to use BEC system radio units.

A 2 channel radio is composed of things like a transmitter, receiver and servos.

Transmitter... It is control box which manipulates by stick movements. Signal waves are transmitted through on antenna.

Receiver... Receive the signals from the transmitter and send them to the servos.

Servo... They move the control mechanism of a model car in accordance with the signals from the receiver.

Antenna... An antenna on the transmitter sends signals, and one on the receiver accepts them. They should be fully extended.

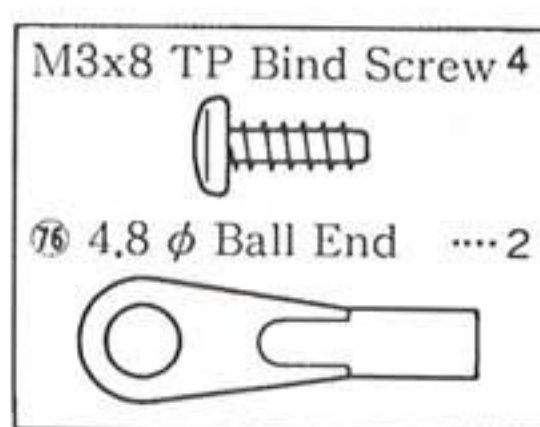
Trim Lever... They will adjust the neutral position of servos, thus regulate the steering and advancing controls finely.

Battery... Meter You can tell the amount of electricity in a battery and how the signals are emitted.

Servo Horn... They are intermediate devices on the servos to activate the controls. They are several types in shape, they should be selected depending upon the usage.

When switch on the radio...Get the switches in order from transmitter to receiver.
When switch off the radio...In order from receiver to transmitter.

21 INSTALLATION OF SERVO ROD

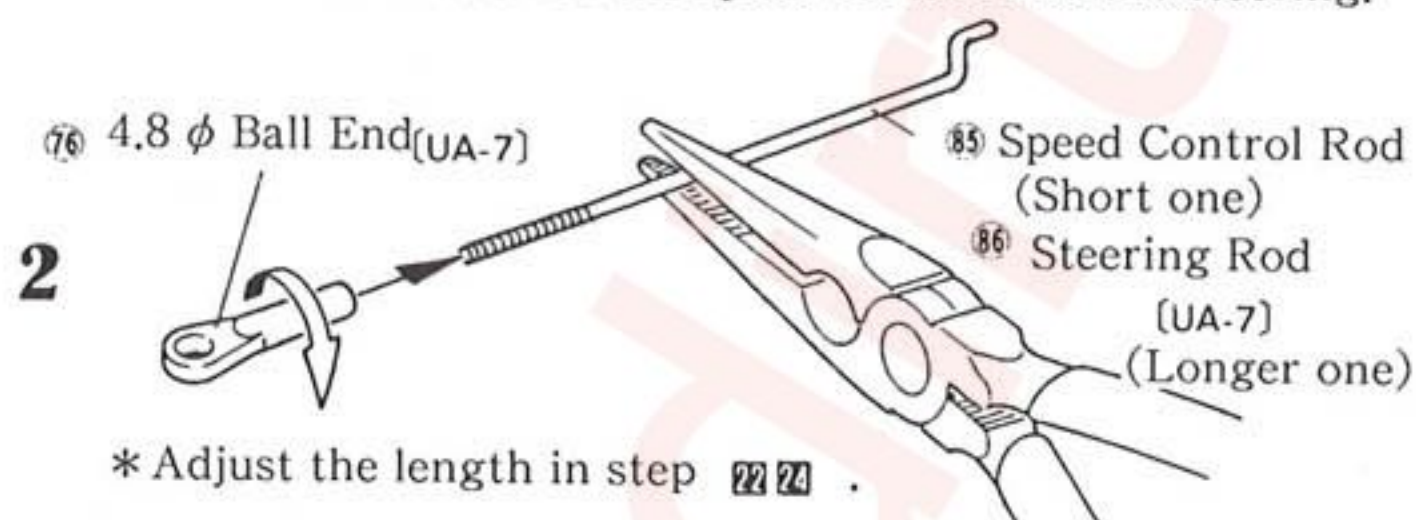


1 Cut off the shaded portion.

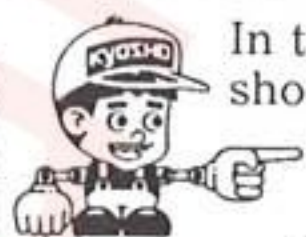
Enlarge the hole to the thickness of the rod.

Use a hole 14mm away from the center.

* Assemble 2 sets for the speed control and the steering.

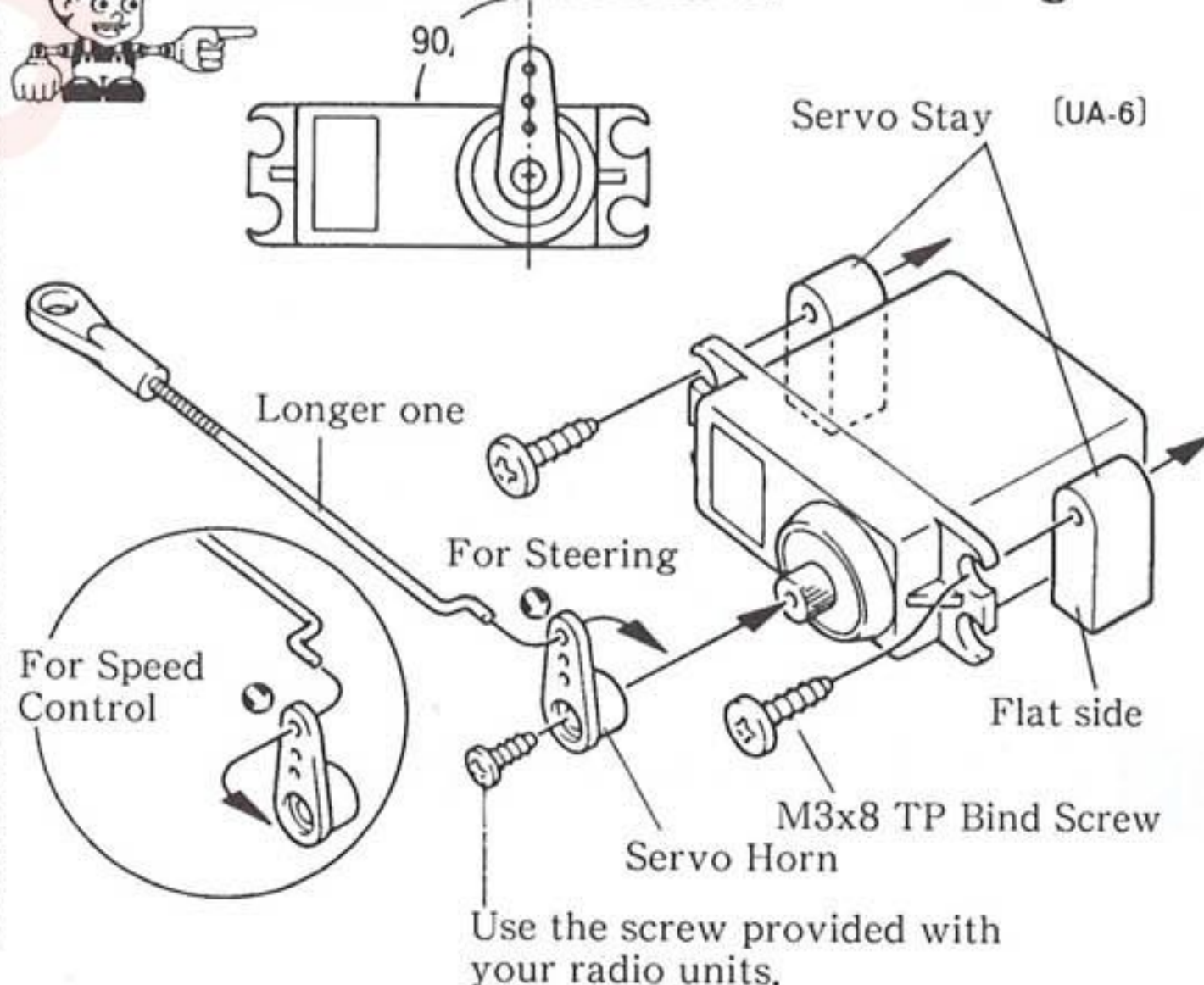


* Adjust the length in step 22.



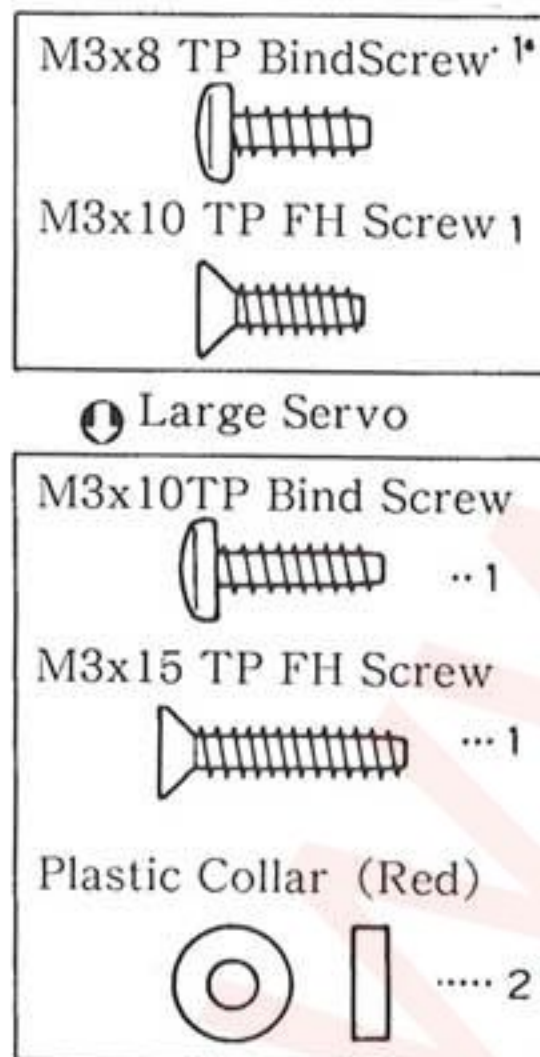
In the neutral position the servo arm should be at 90° to the servo.

3



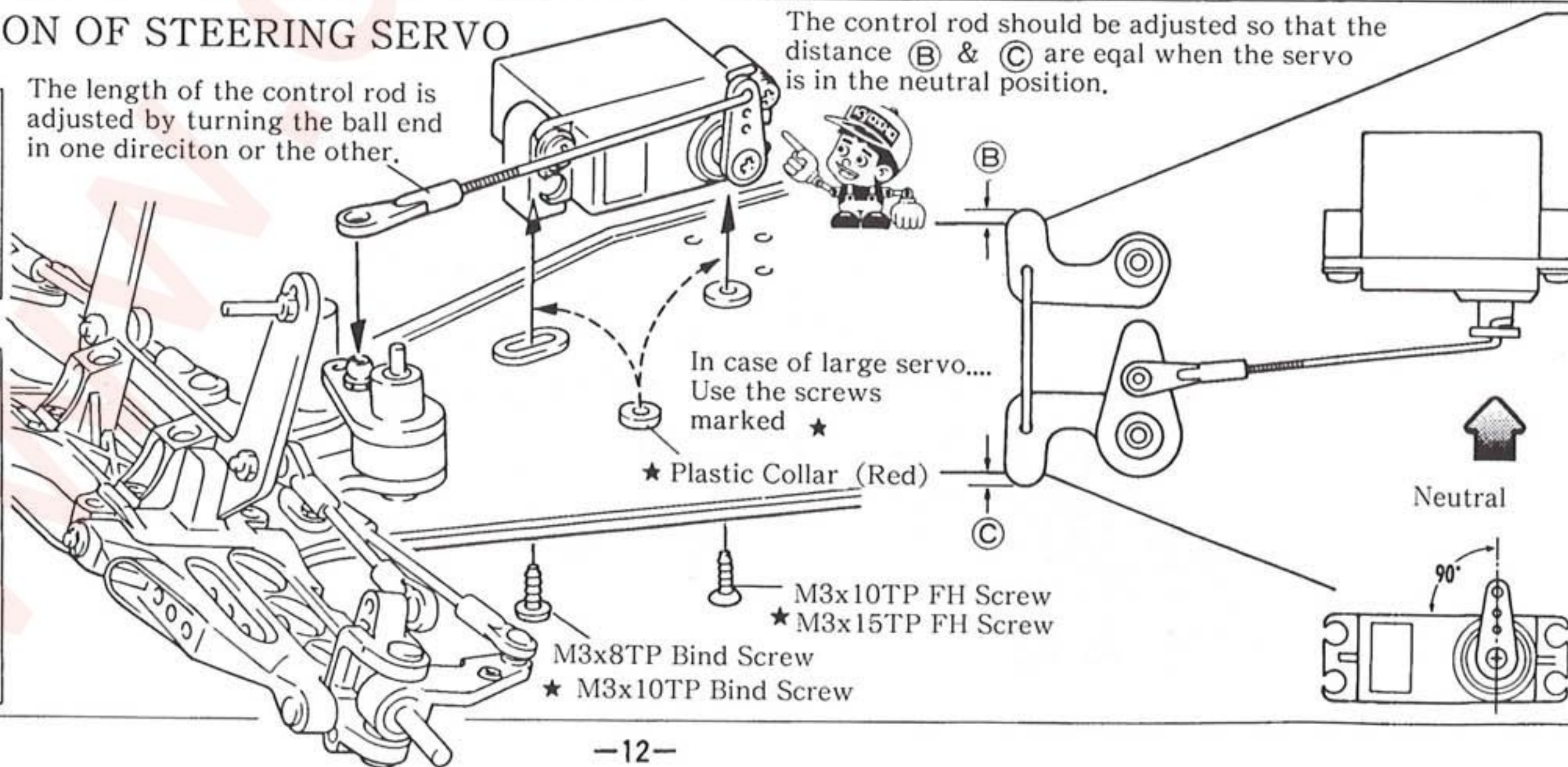
Use the screw provided with your radio units.

22 INSTALLTION OF STEERING SERVO



The length of the control rod is adjusted by turning the ball end in one direction or the other.

The control rod should be adjusted so that the distance (B) & (C) are equal when the servo is in the neutral position.



In case of large servo... Use the screws marked *

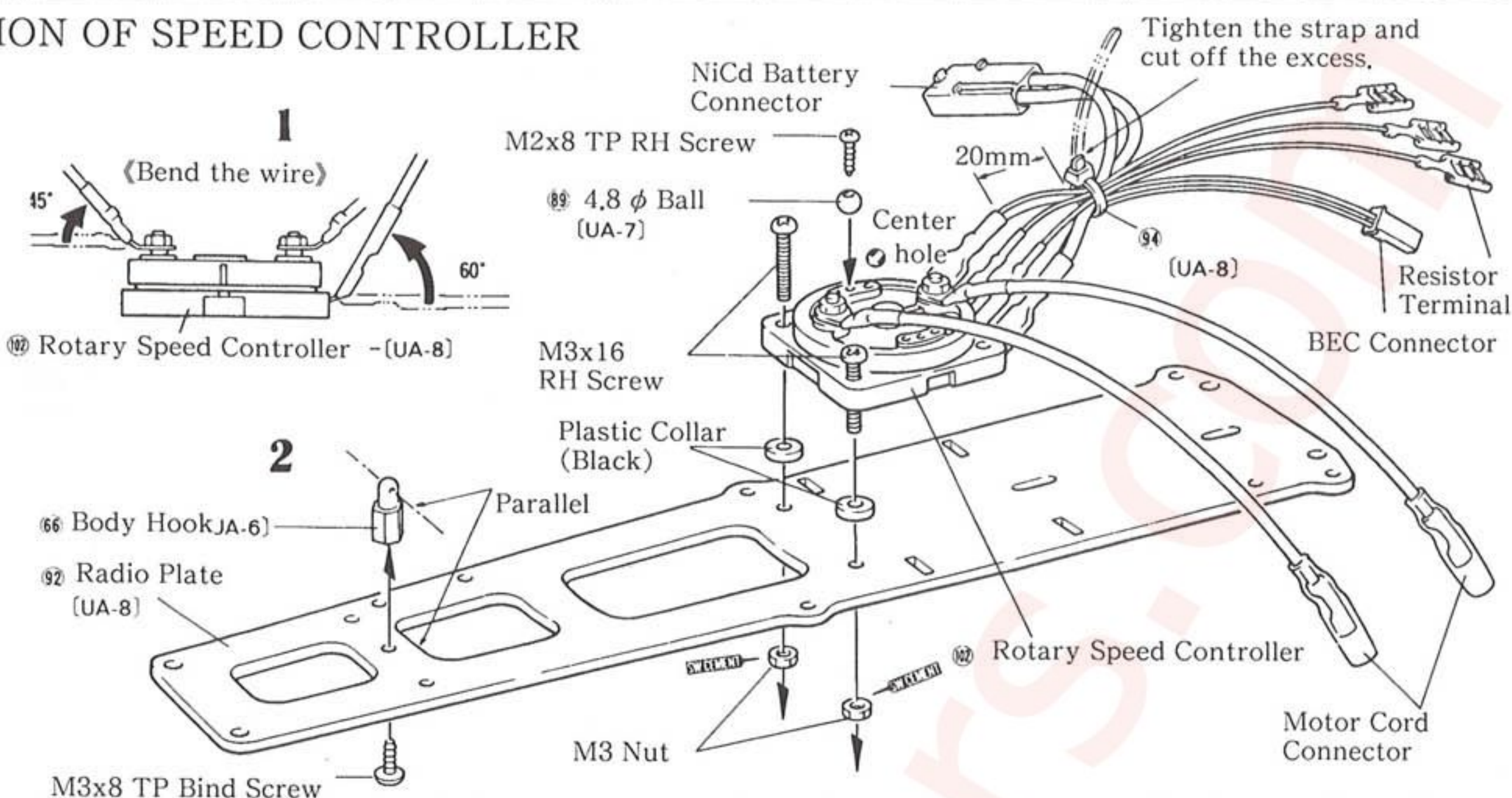
* Plastic Collar (Red)

M3x10TP FH Screw
* M3x15TP FH Screw

M3x8TP Bind Screw
* M3x10TP Bind Screw

23 INSTALLATION OF SPEED CONTROLLER

- M2x8 TP RH Screw 1
- M3x8 TP Bind Screw 1
- M3x16 RH Screw 2
- M3 Nut 2
- Plastic Collar (Black) 2
- 4.8 φ Ball 1



24 INSTALLATION OF SPEED CONTROL SERVO

- M3x8 TP Bind Screw 2
- Large Servo
- M3x10 TP Bind Screw 2
- Plastic Collar (Red) 2

The length of the control rod can be adjusted by turning the ball end in or out.

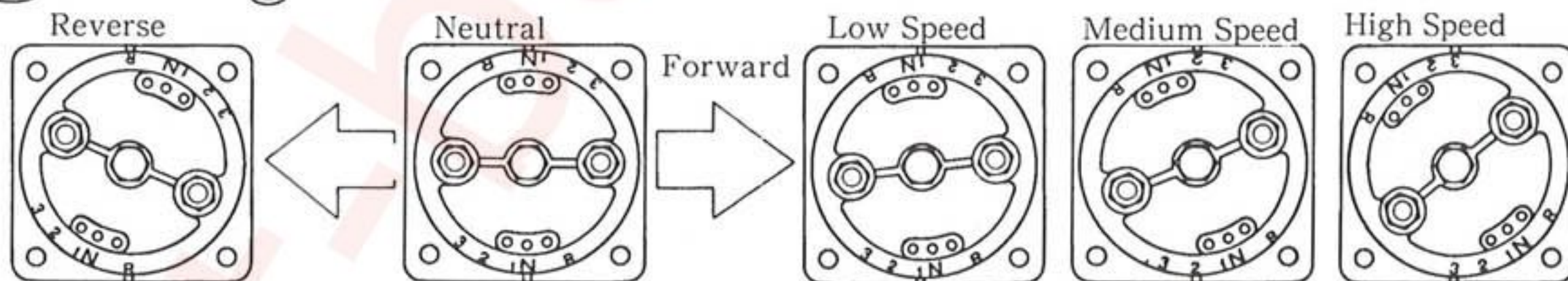
The mounting position can be adjusted by sliding the screws within the oval holes.

《Top View》

《Side View》

Neutral

Movement of Speed Controller

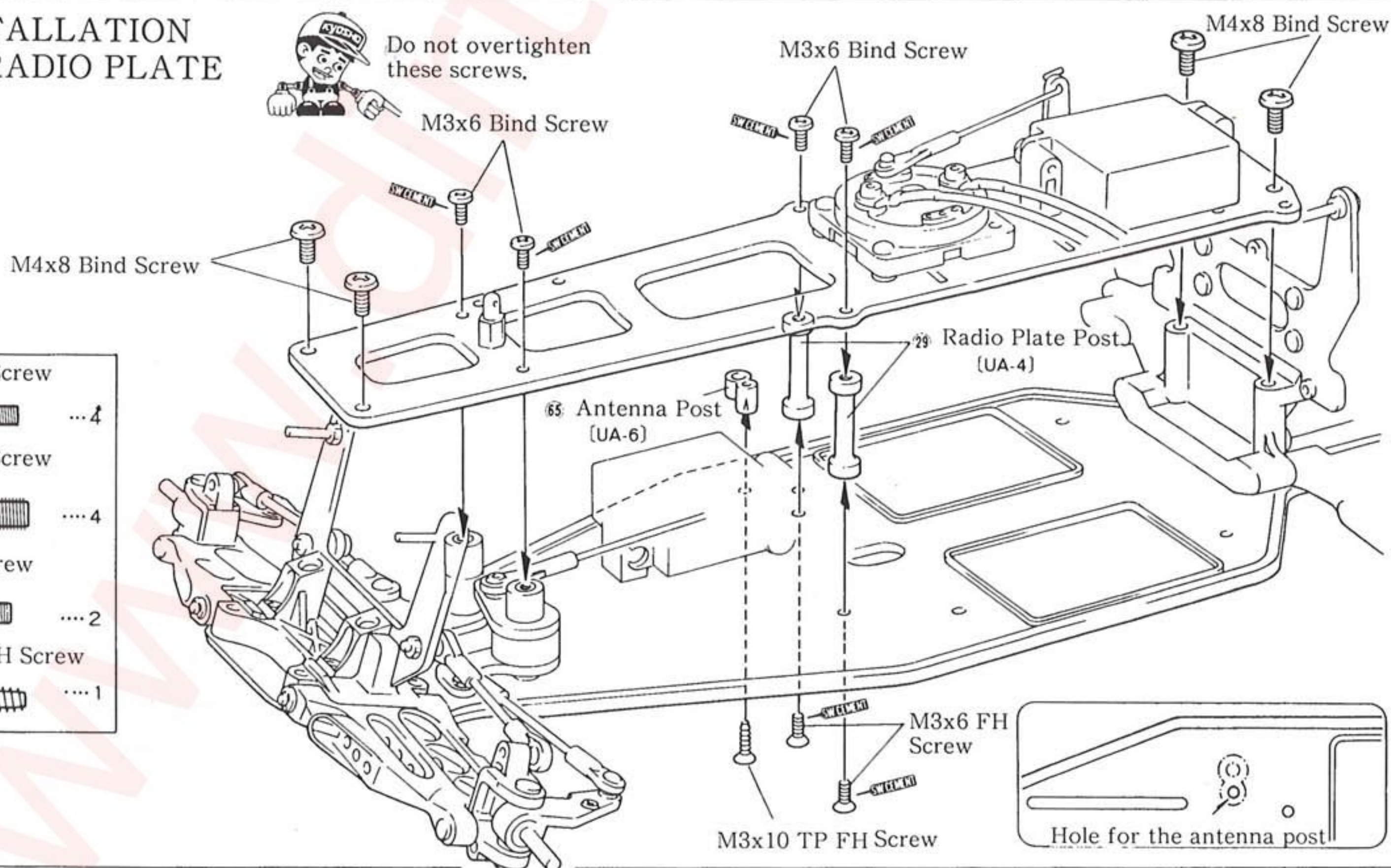


25 INSTALLATION OF RADIO PLATE

- M3x6 Bind Screw 4
- M4x8 Bind Screw 4
- M3x6 FH Screw 2
- M3x10 TP FH Screw 1

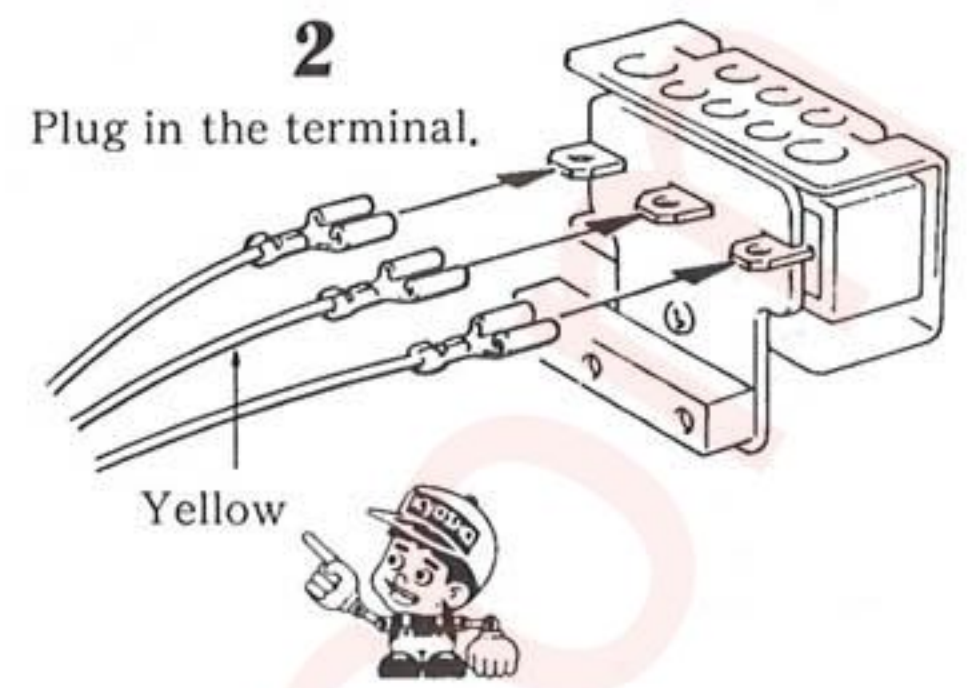
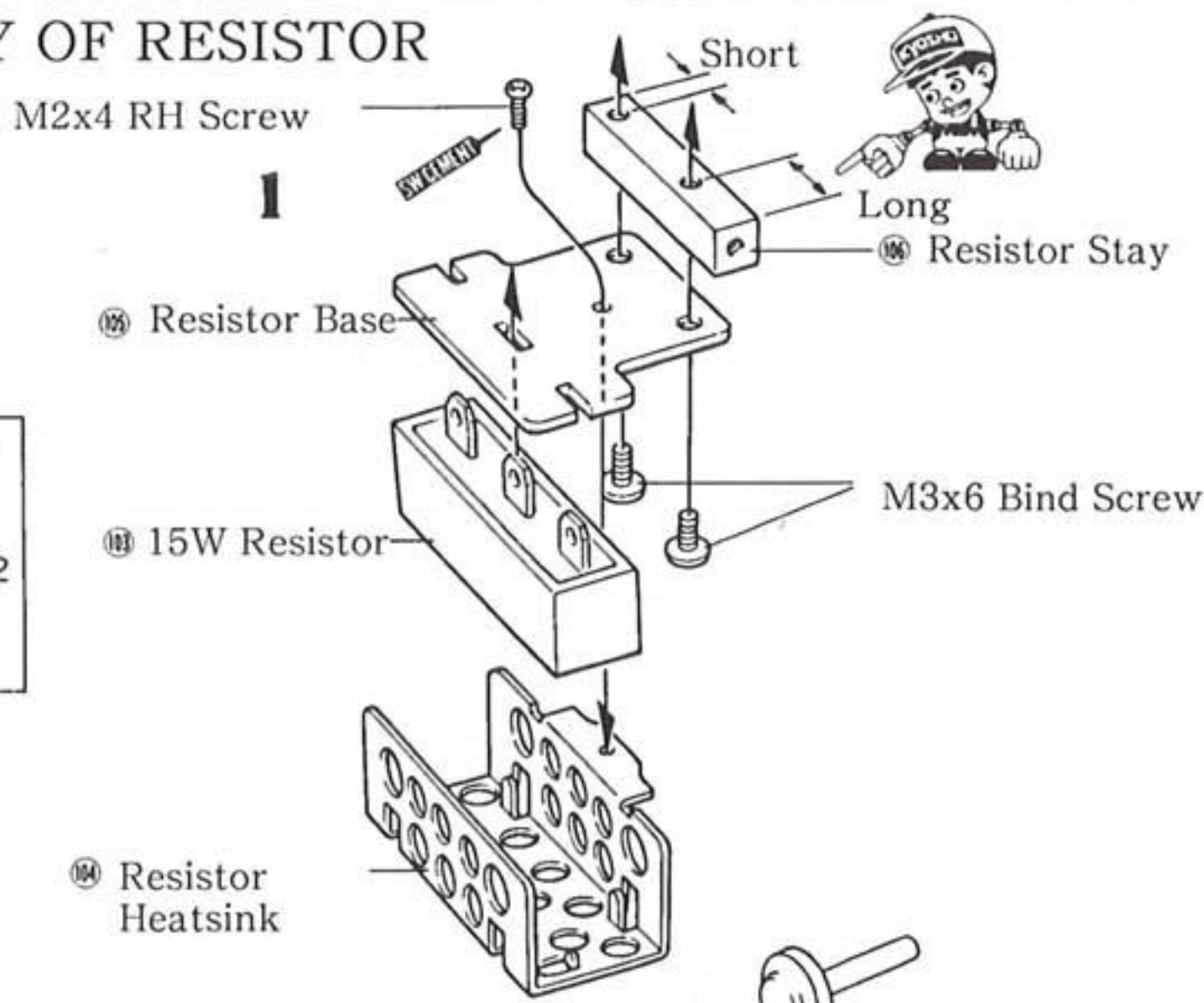
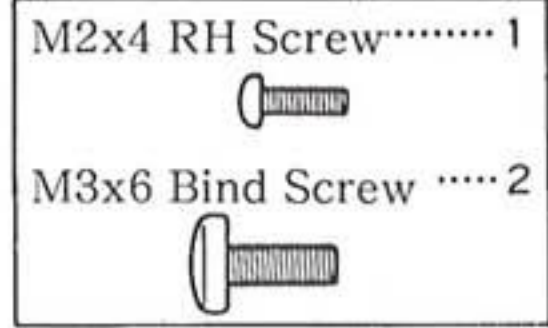


Do not overtighten these screws.

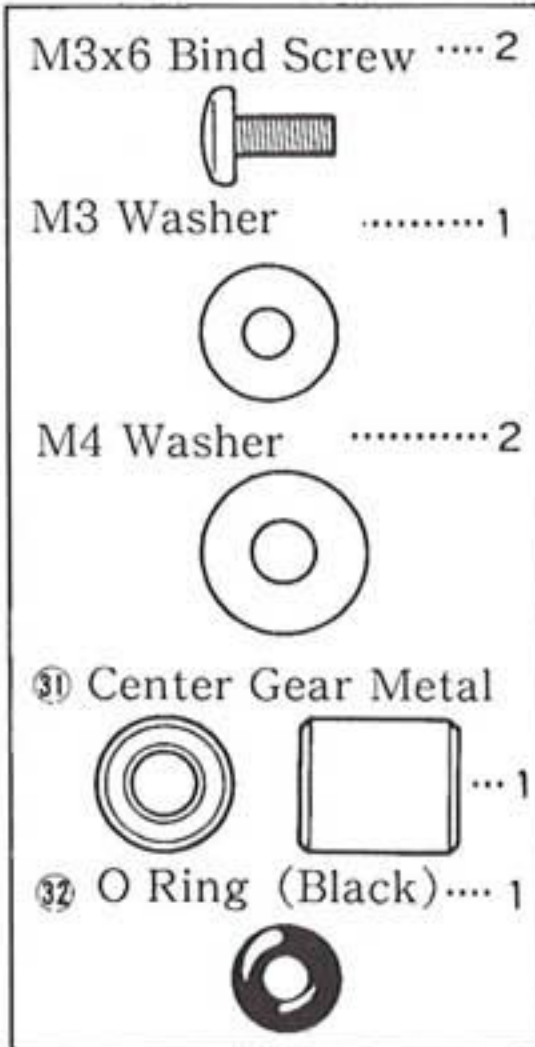


26 ASSEMBLY OF RESISTOR

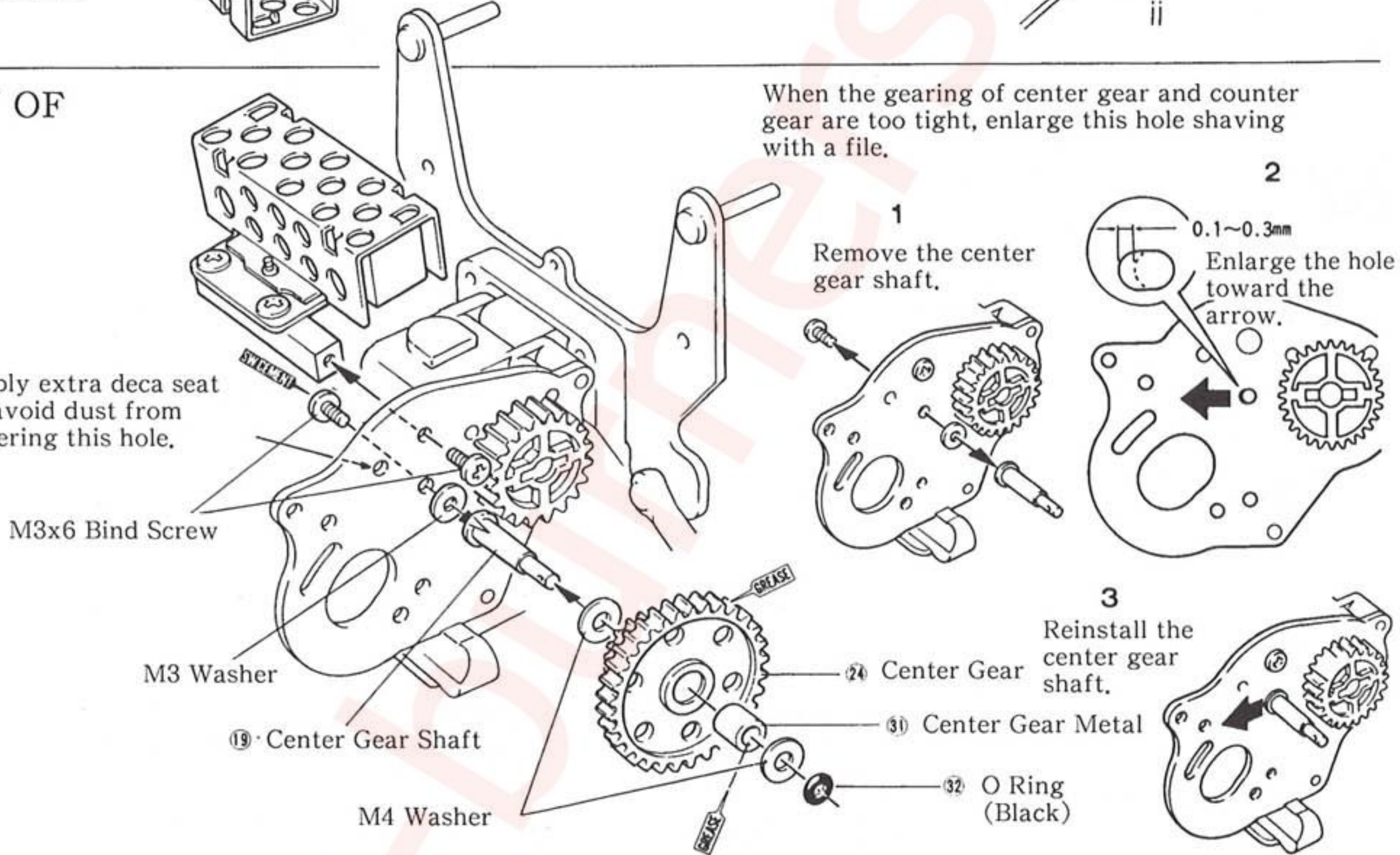
★ These parts used in this step are bagged



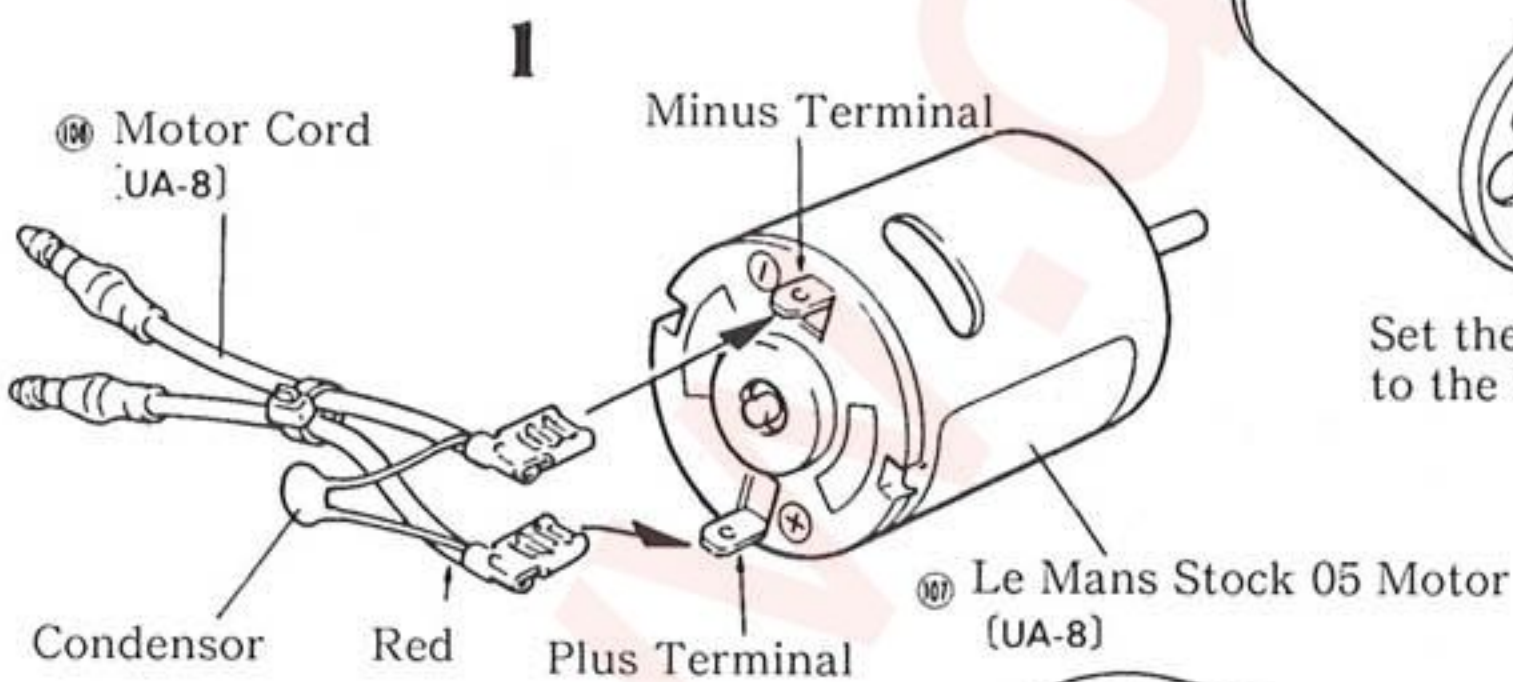
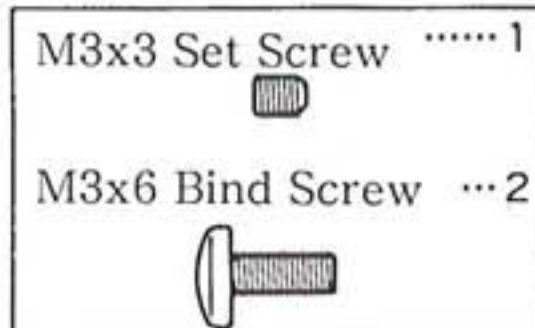
27 INSTALLATION OF RESISTOR AND CENTER GEAR



Apply extra deca seat to avoid dust from entering this hole.

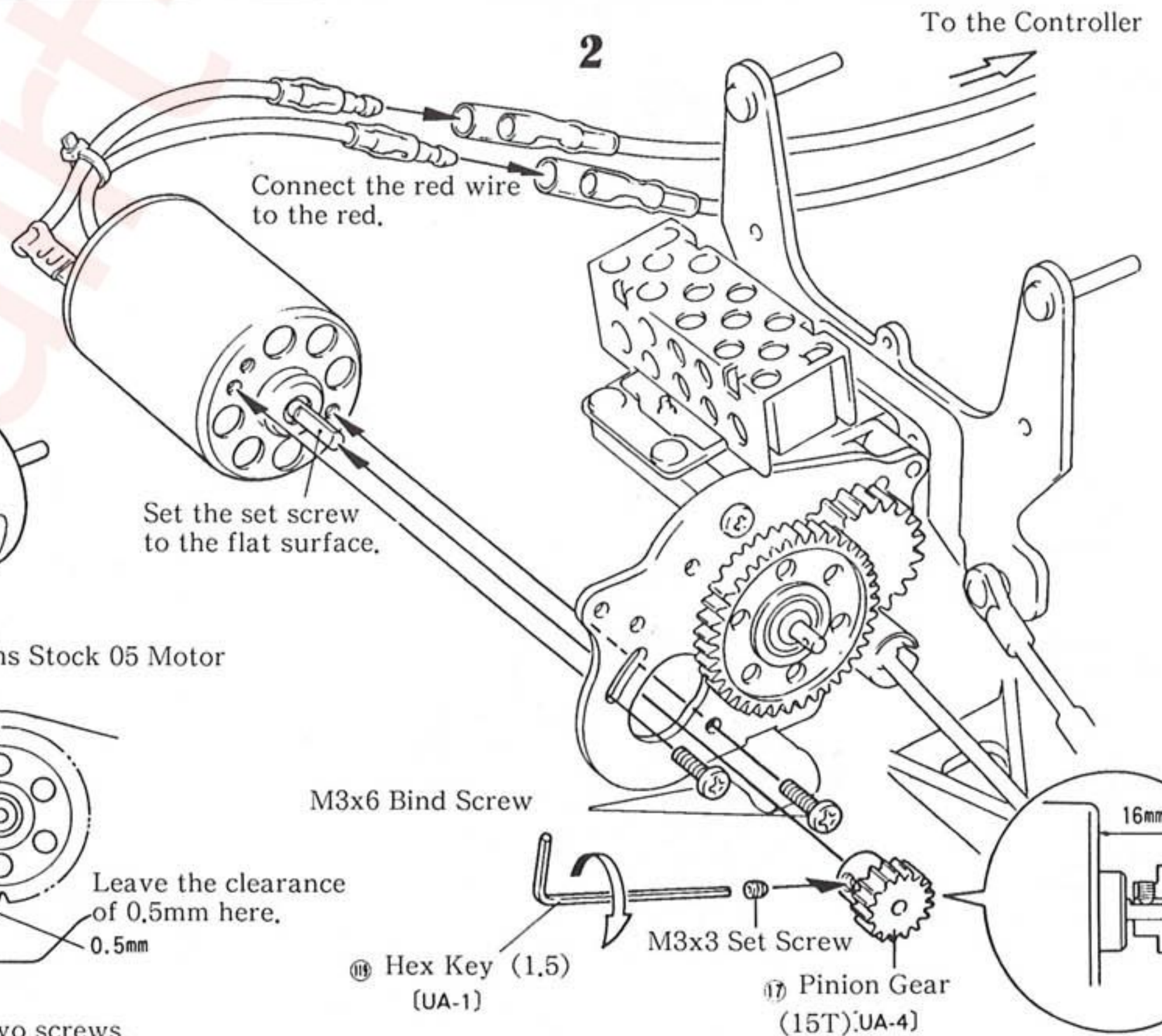
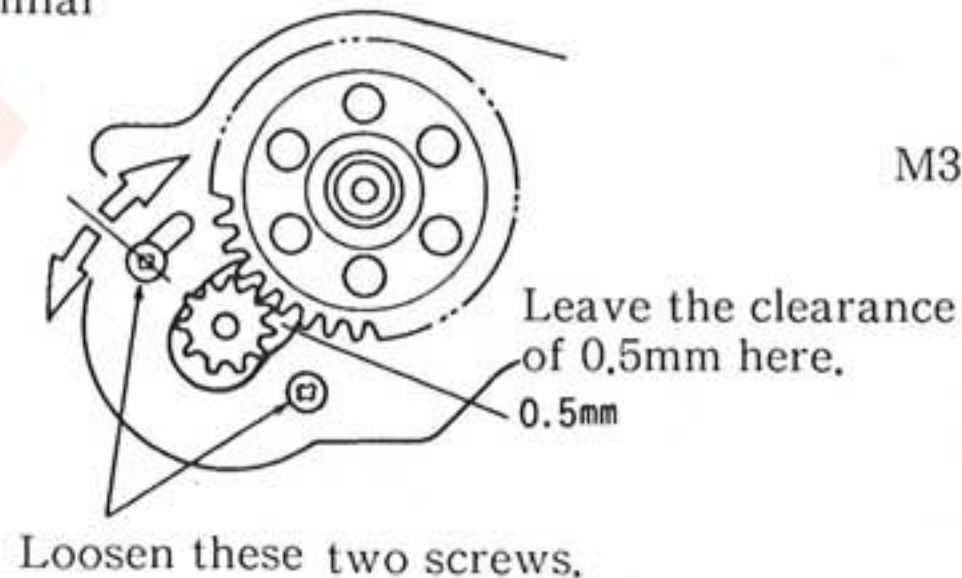


28 INSTALLATION OF MOTOR

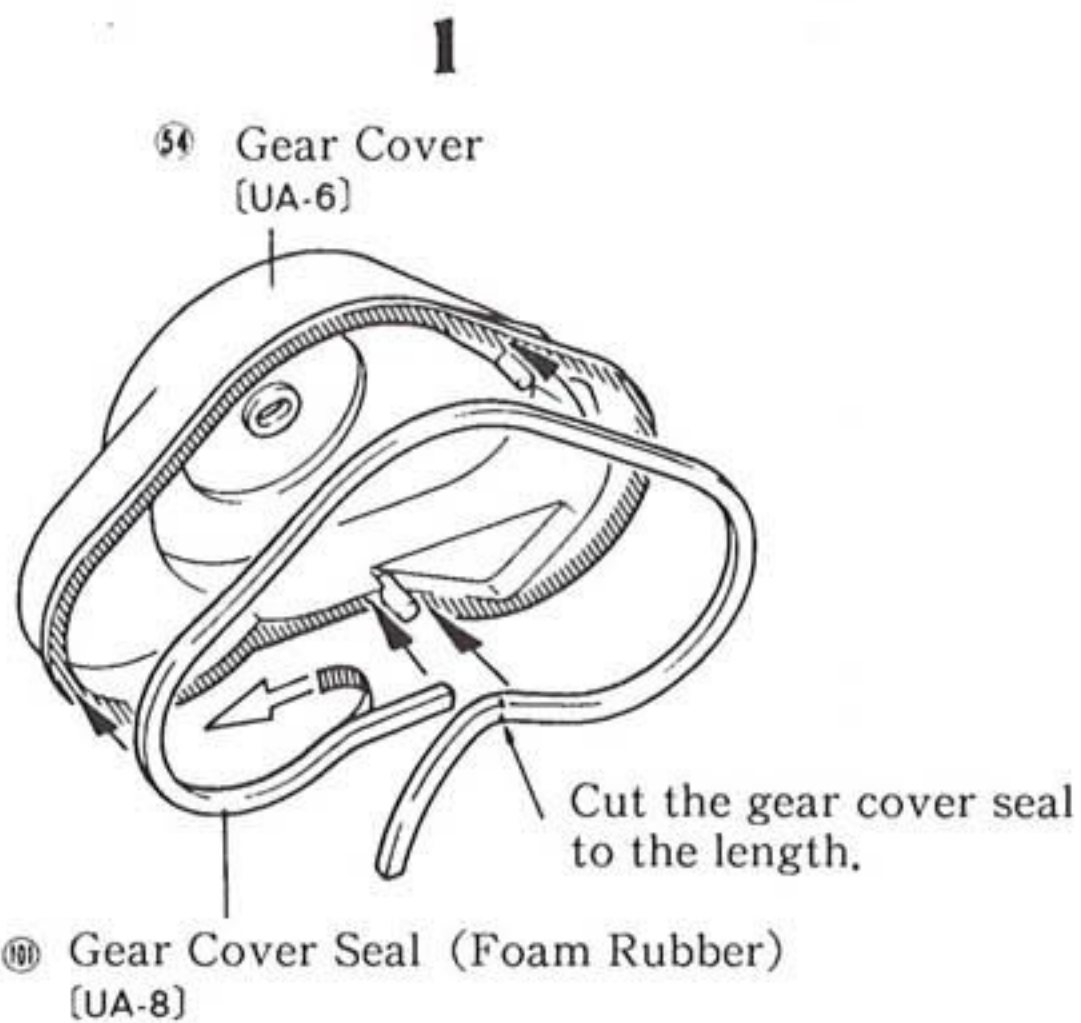
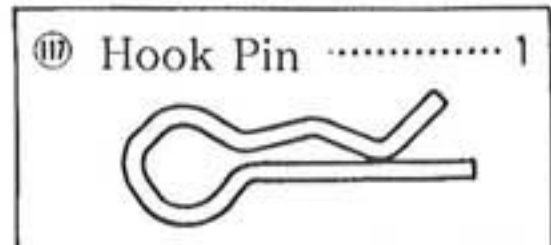


*Be careful about short circuit of the condenser.

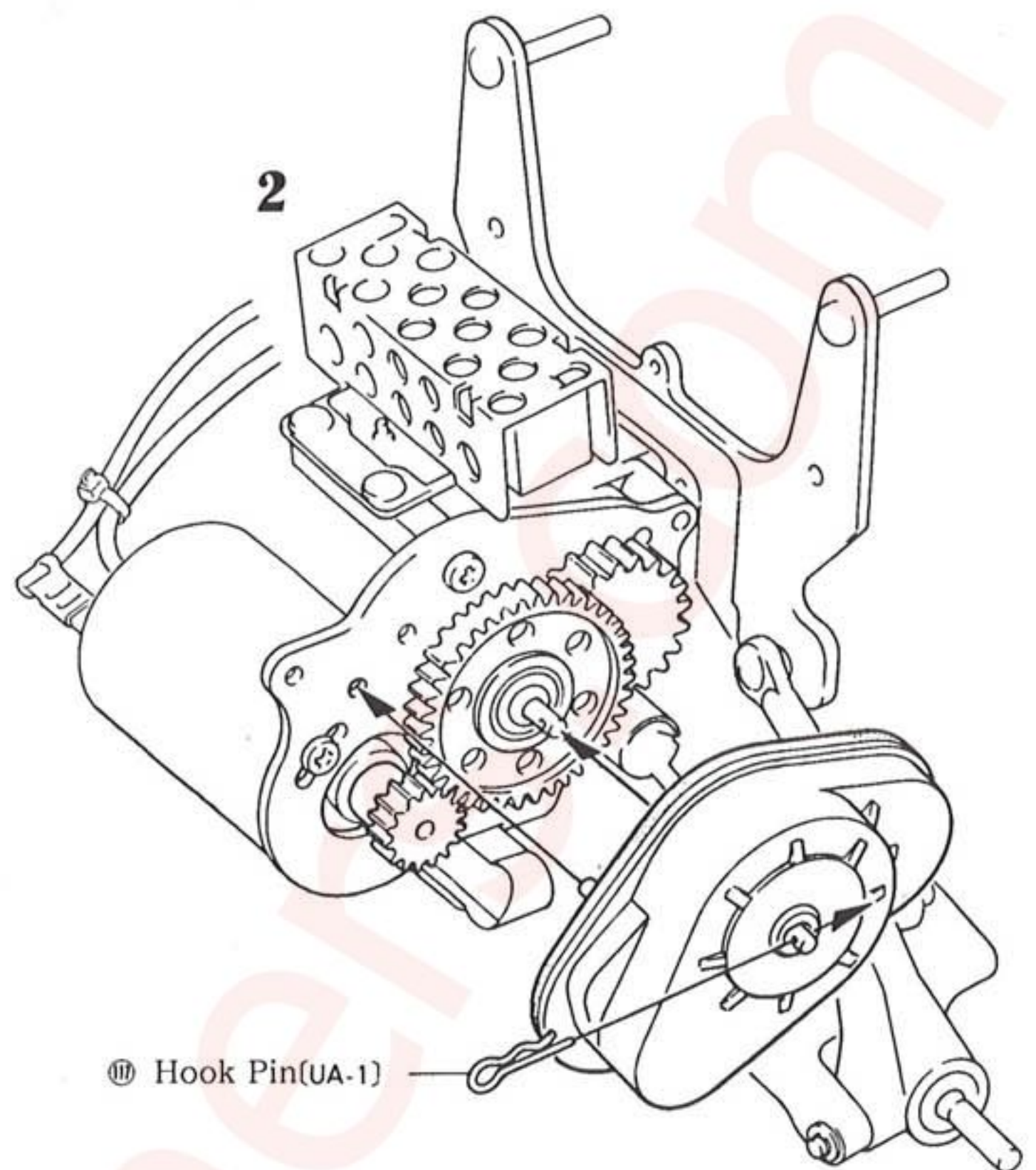
《Backlash》
The pinion gear / center gear mesh may be adjusted by loosening these two screws and sliding the motor to the proper position.



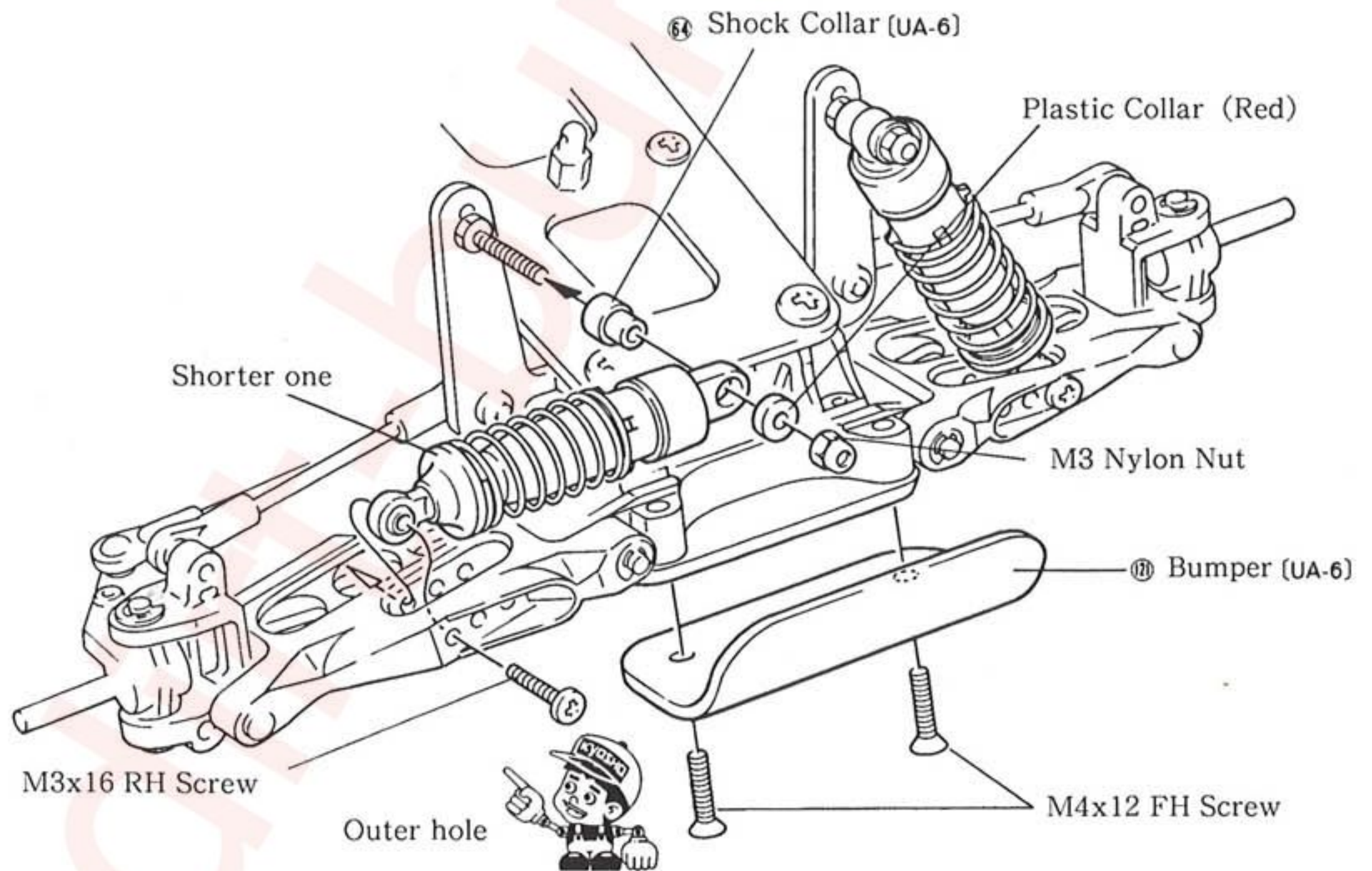
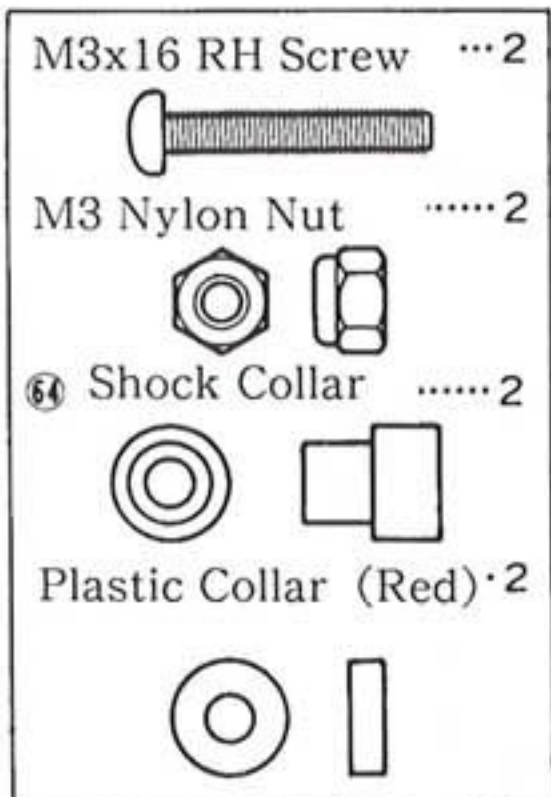
29 INSTALLATION OF GEAR COVER



Remove the backing paper and put the seal along the area indicated with diagonal lines.

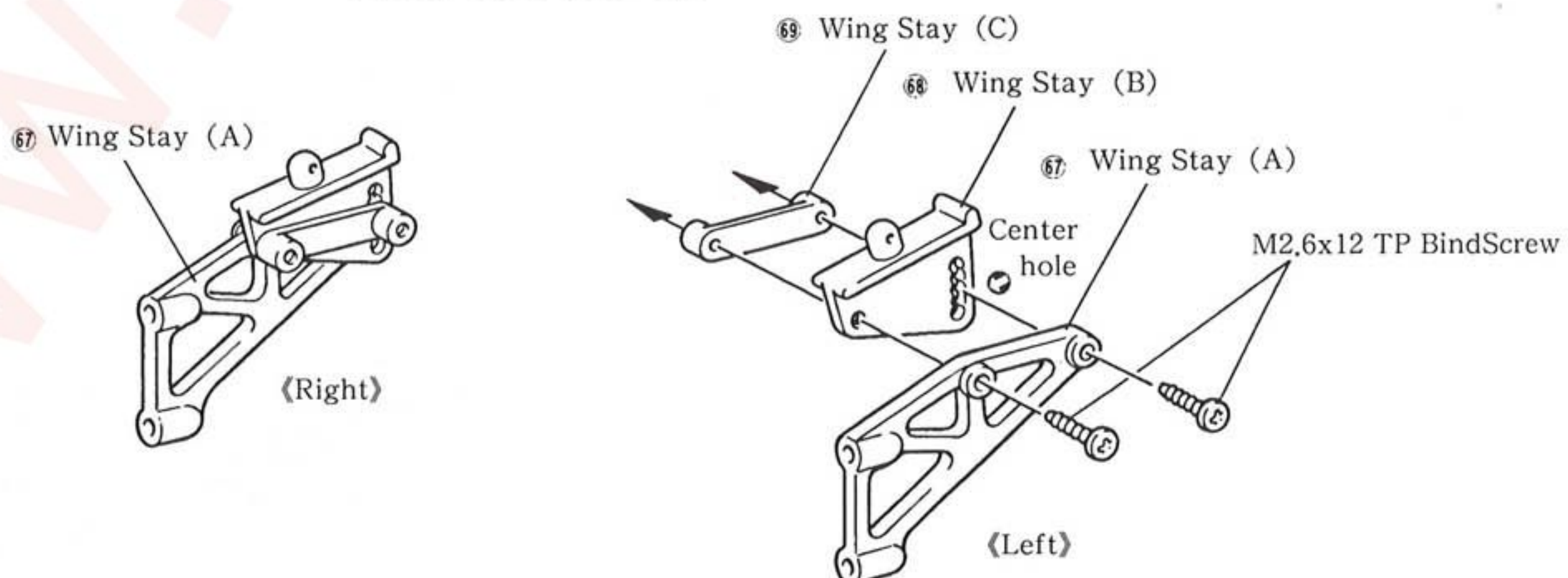
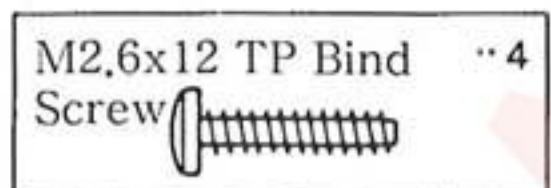


30 INSTALLATION OF FRONT SHOCK AND BUMPER

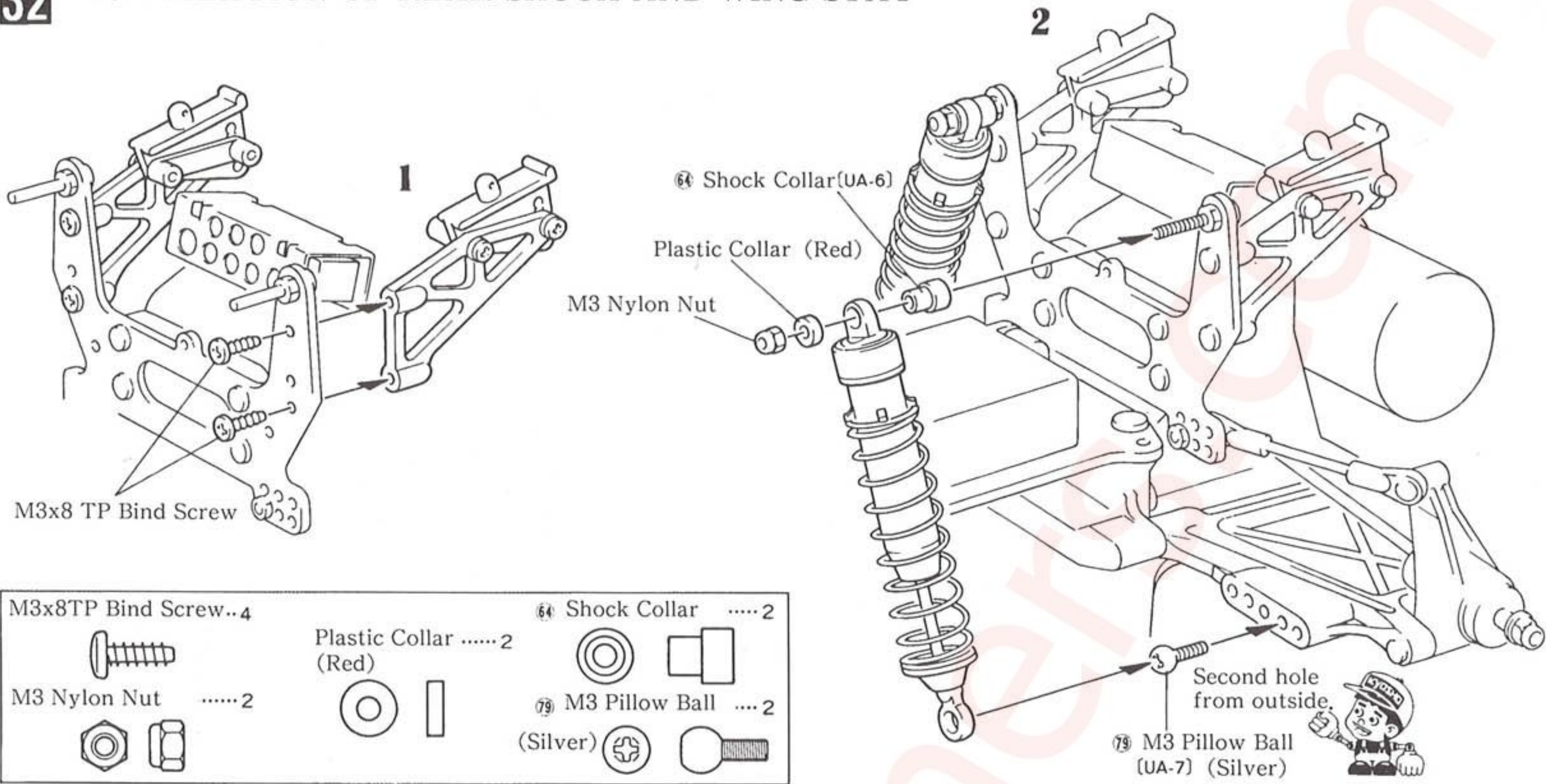


31 ASSEMBLY OF WING STAY

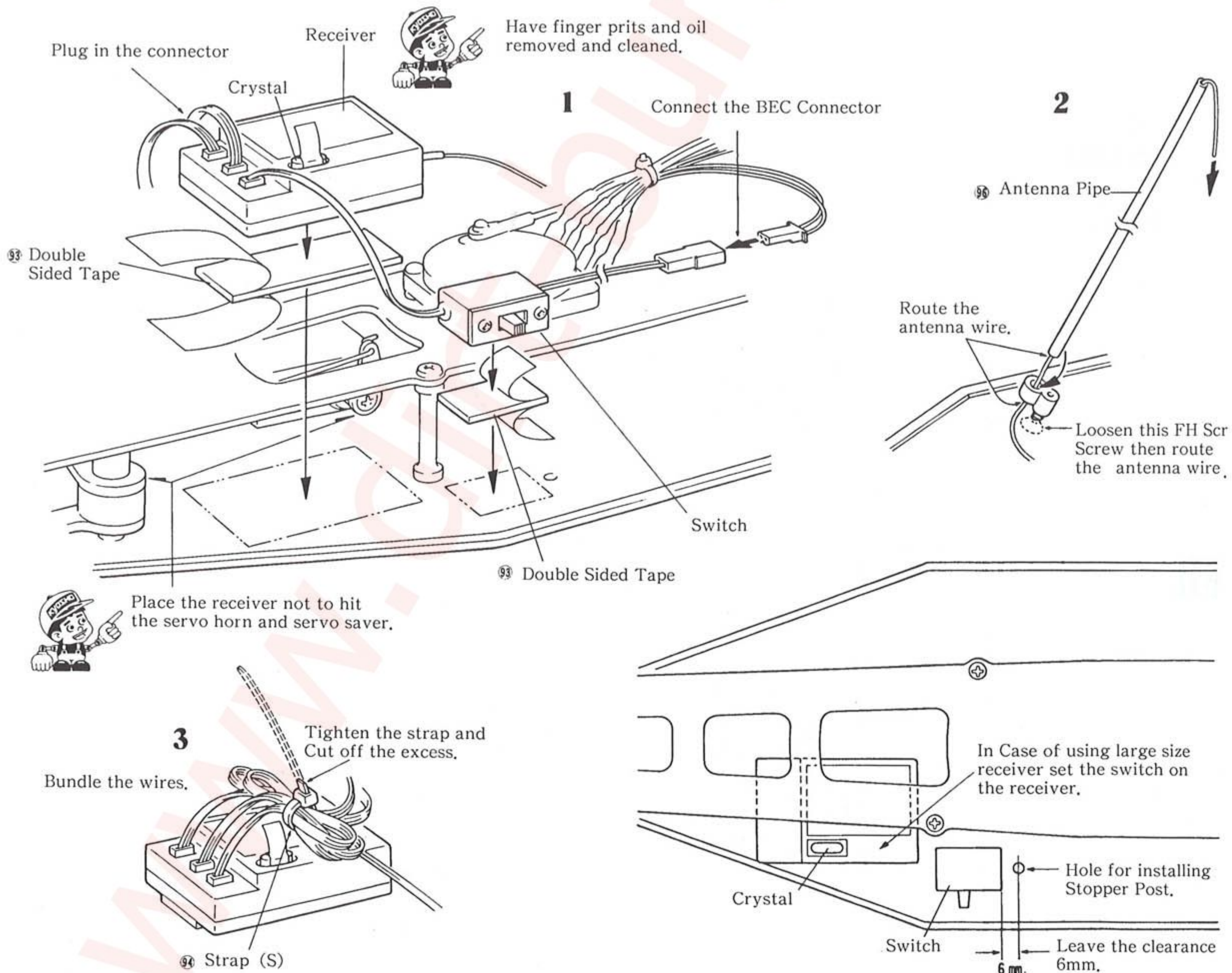
★ These parts used in this step are in bag [UA-6]. (Screws are in [UA-1])



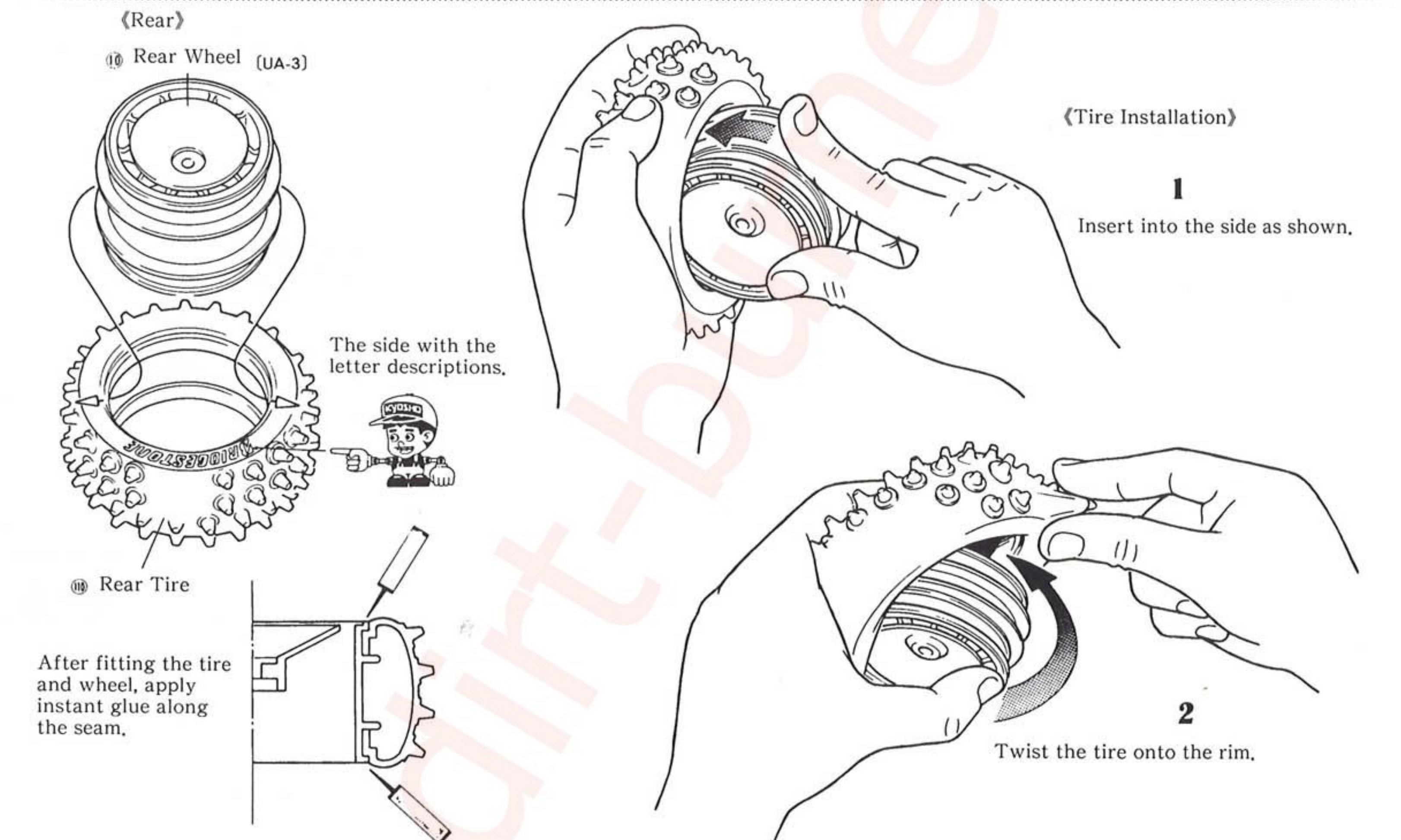
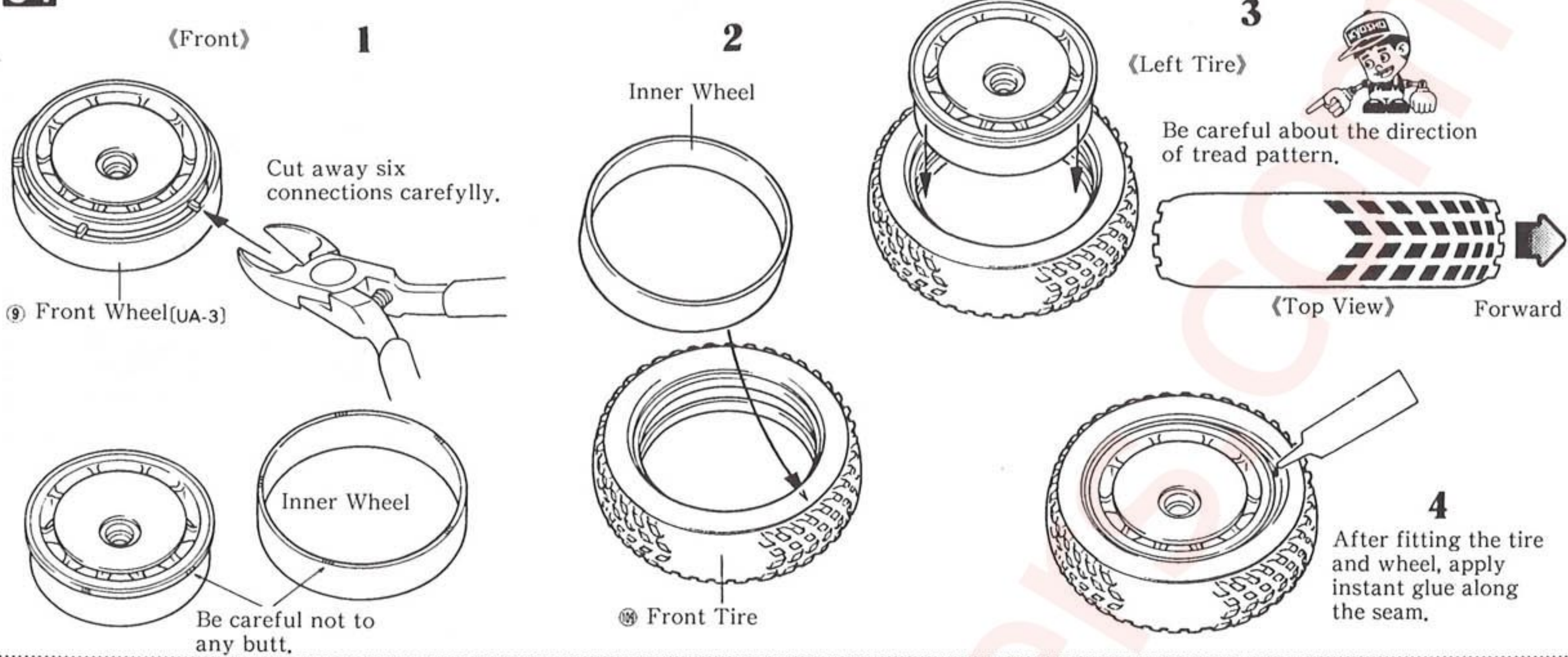
32 INSTALLATION OF REAR SHOCK AND WING STAY



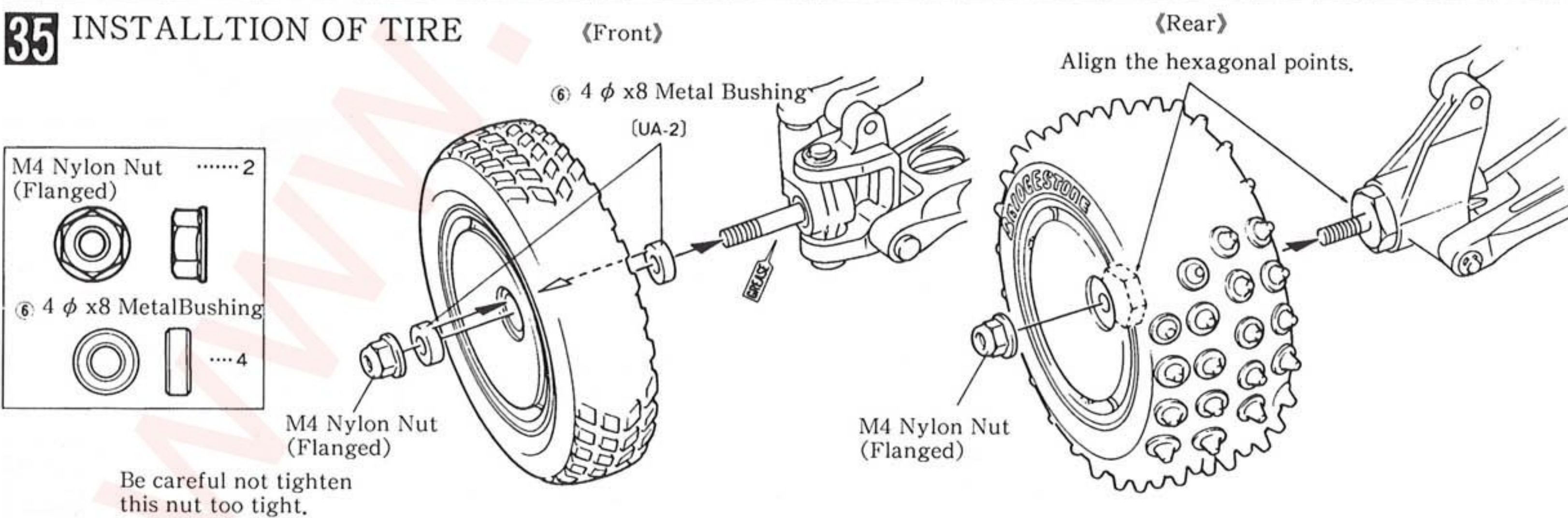
33 INSTALLATION OF RECEIVER AND SWITCH ★ These parts use in this step are in bag [UA-8] .



34 ASSEMBLY WHEEL AND TIRE

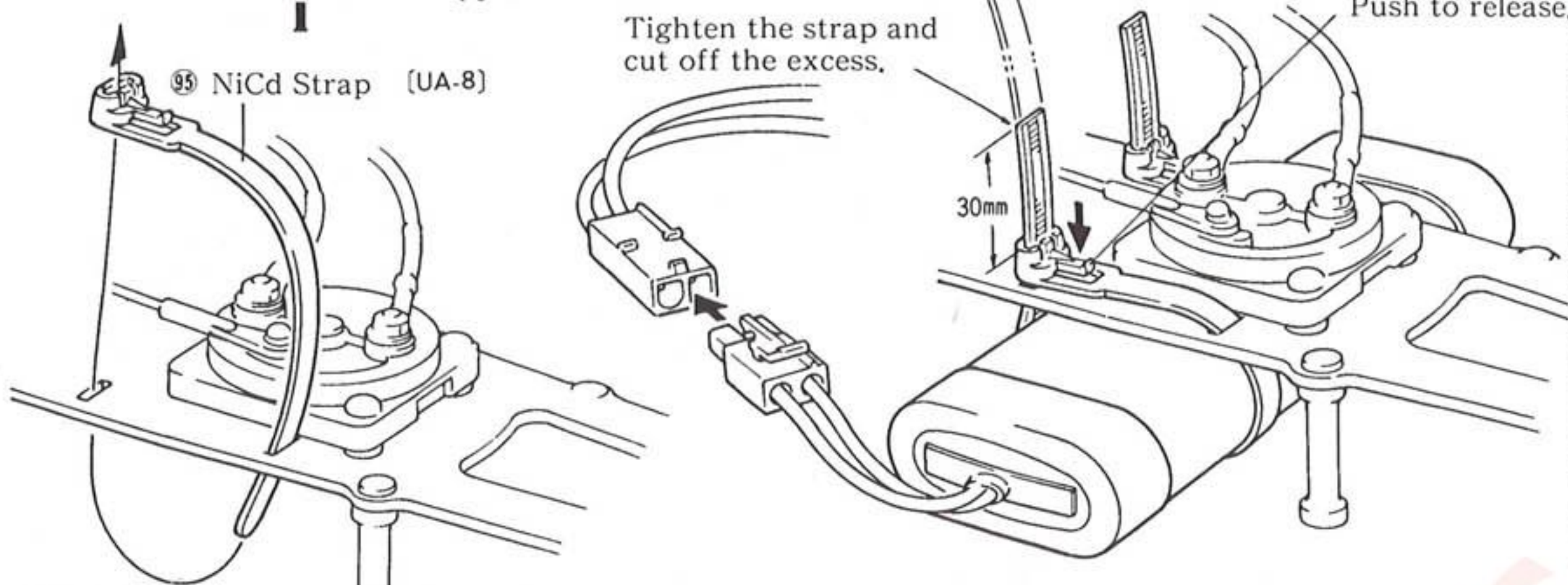


35 INSTALLTION OF TIRE



36 INSTALLATION OF BATTERY

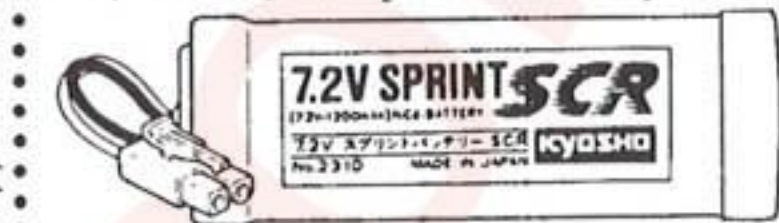
《Stick Type》



KYOSHO

Select a high performance NiCd battery pack high is powerful enough to drive a model car vigorously.

No.2310 7.2V Sprint Battery SCR

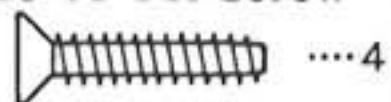


No.2306 7.2V Power Battery

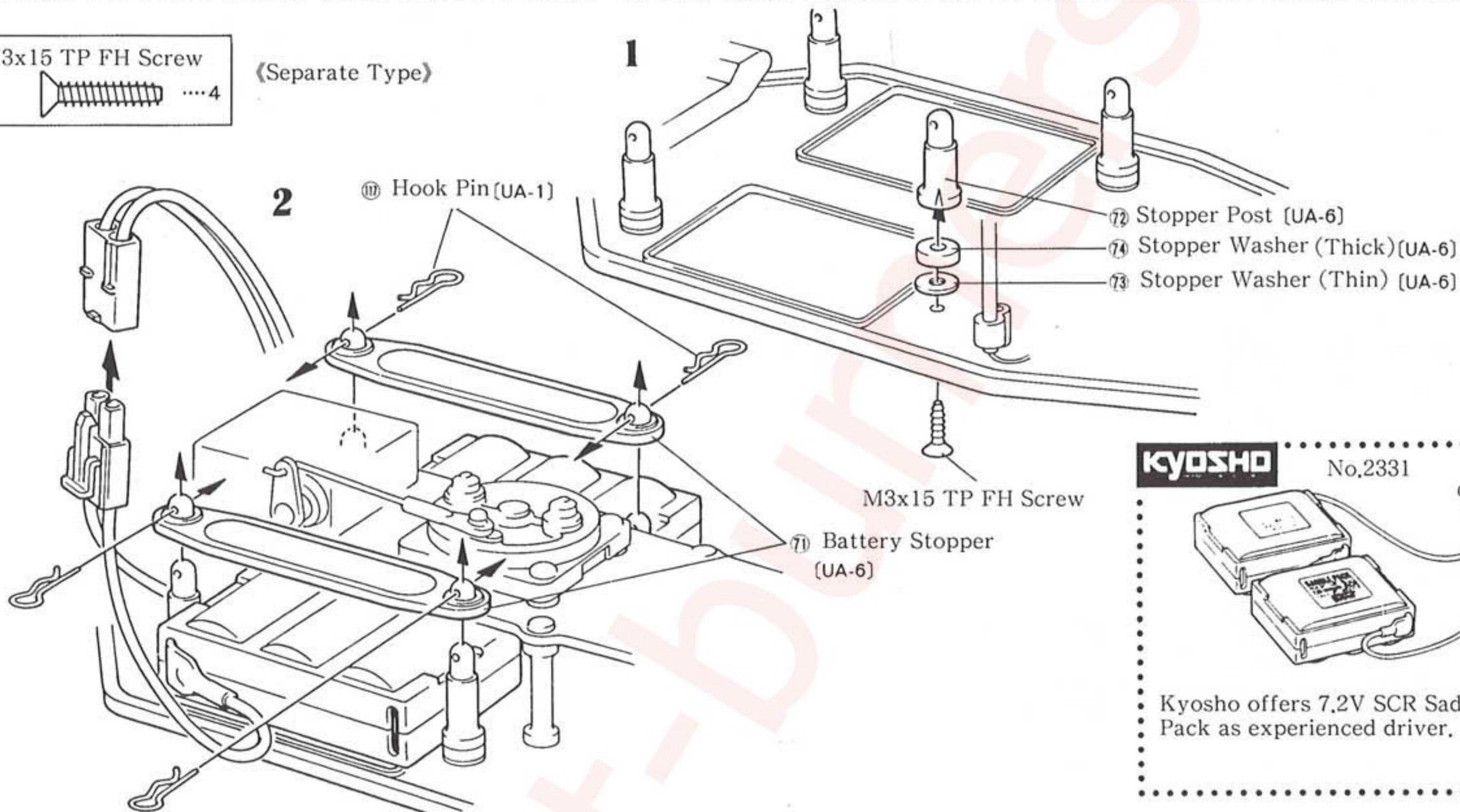


REMOVE THE NICD BATTERY PACK WHEN CAR IS NOT IN OPERATION OR BEING STORED.

M3x15 TP FH Screw



《Separate Type》



KYOSHO

No.2331

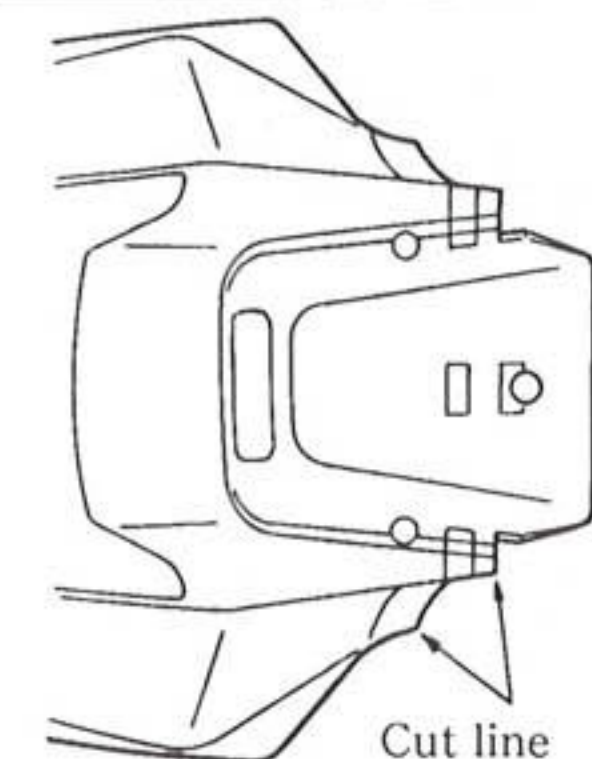
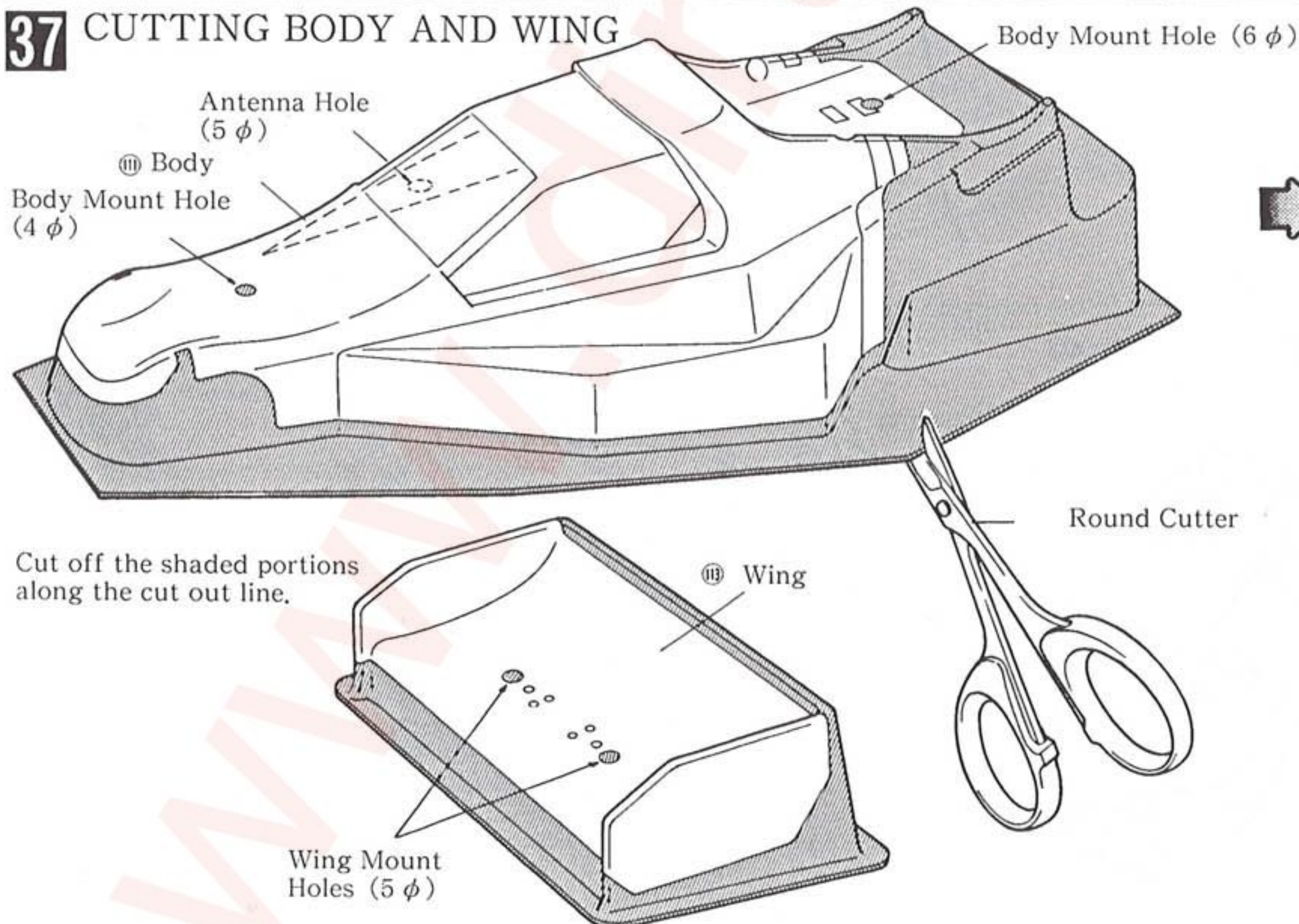


Kyosho offers 7.2V SCR Saddle Pack as experienced driver.

● CUTTING AND INSTALLATION OF BODY

37 ~ 42

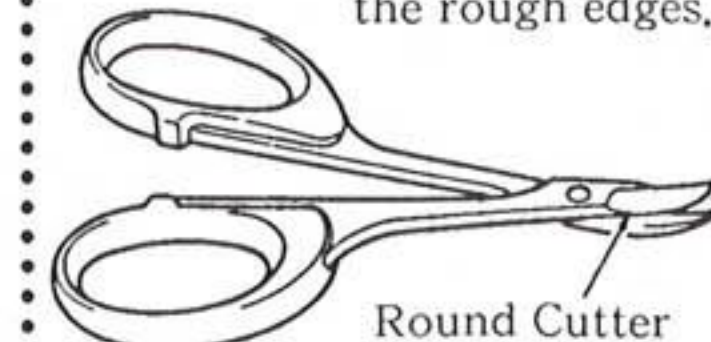
37 CUTTING BODY AND WING



KYOSHO

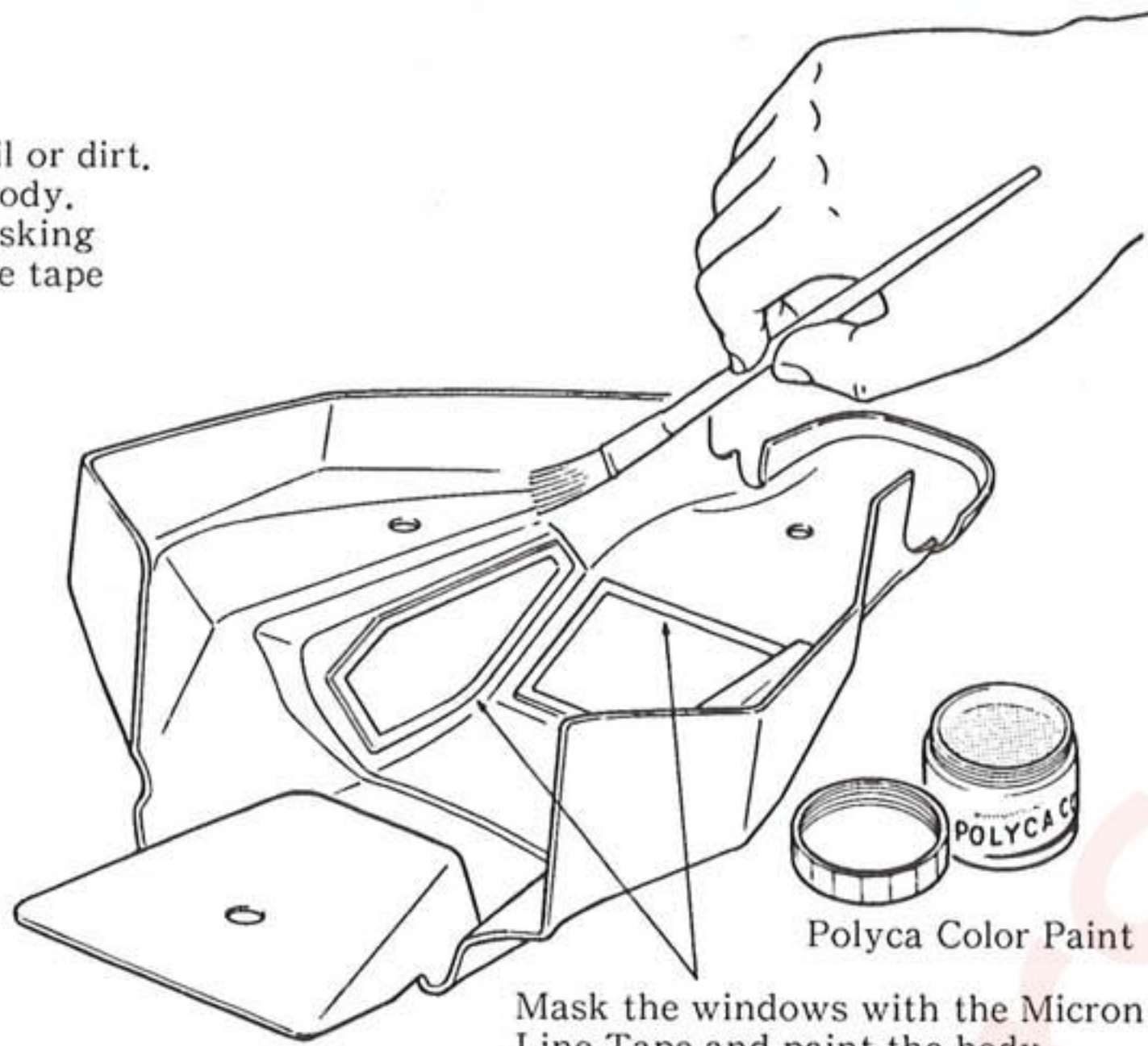
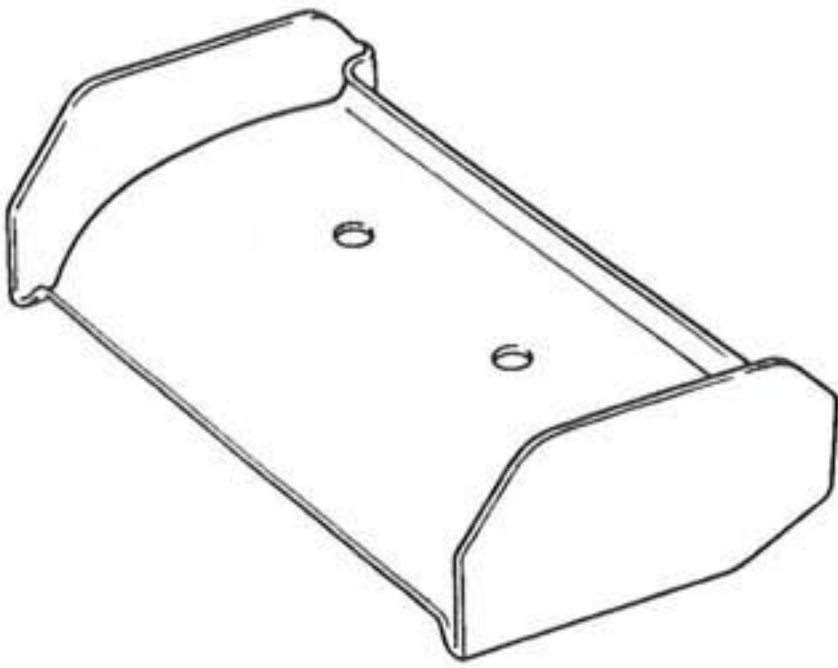
No.1829

These special Lexan Scissors make trimming bodies a breeze and the sander comes in handle for finishing the rough edges.



38 PAINTING 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. Apply the lightest color last.



Polyca Color Paint

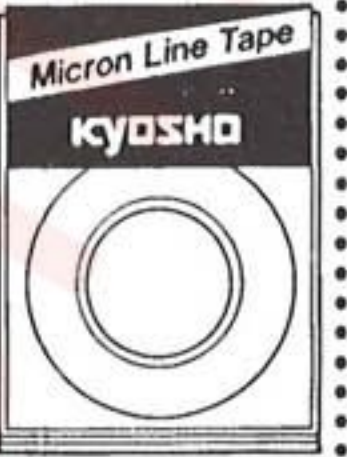
Mask the windows with the Micron Line Tape and paint the body.

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

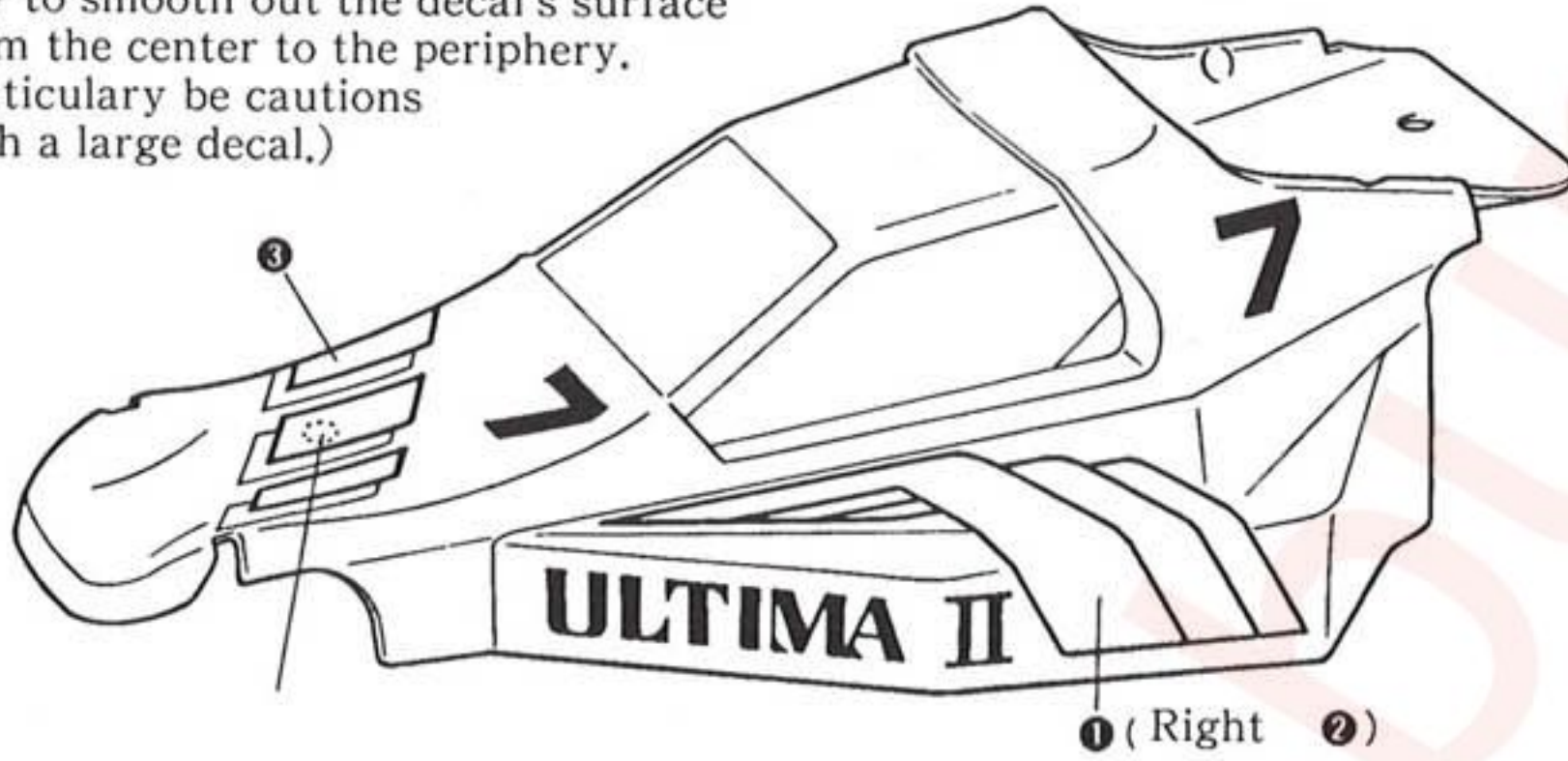
- White, Red, Yellow
- Green, Blue, Sky Blue
- Orange, Black, Violet
- F.Pink, F.Orange
- Yellow Green



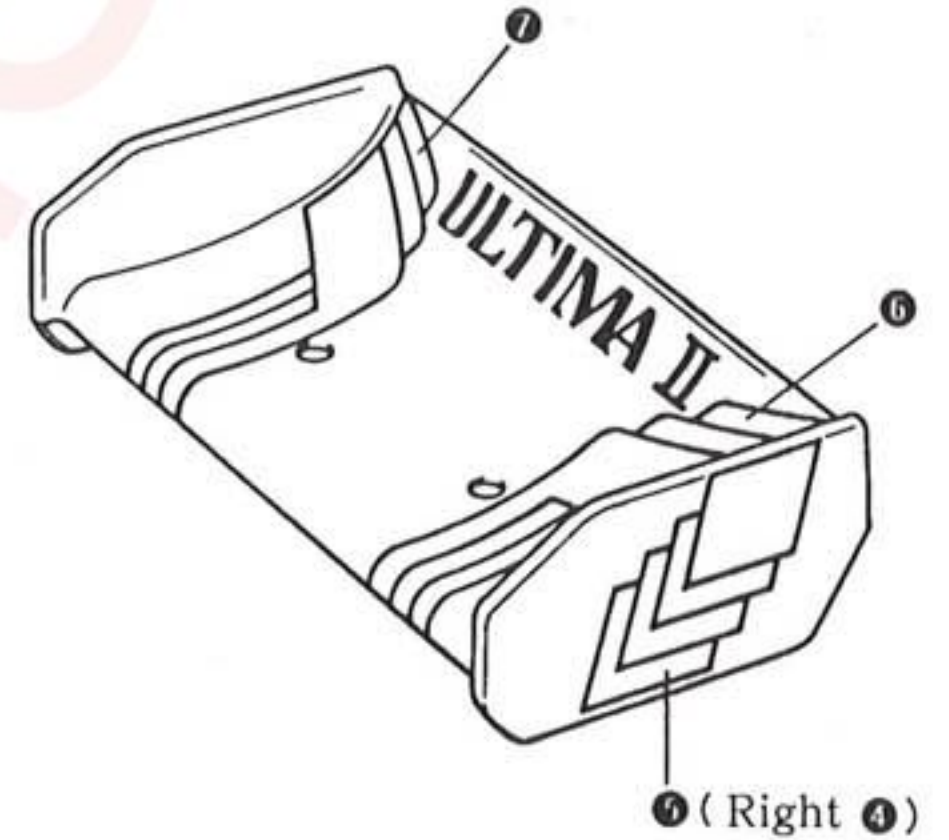
39 APPLING DECAL

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.)

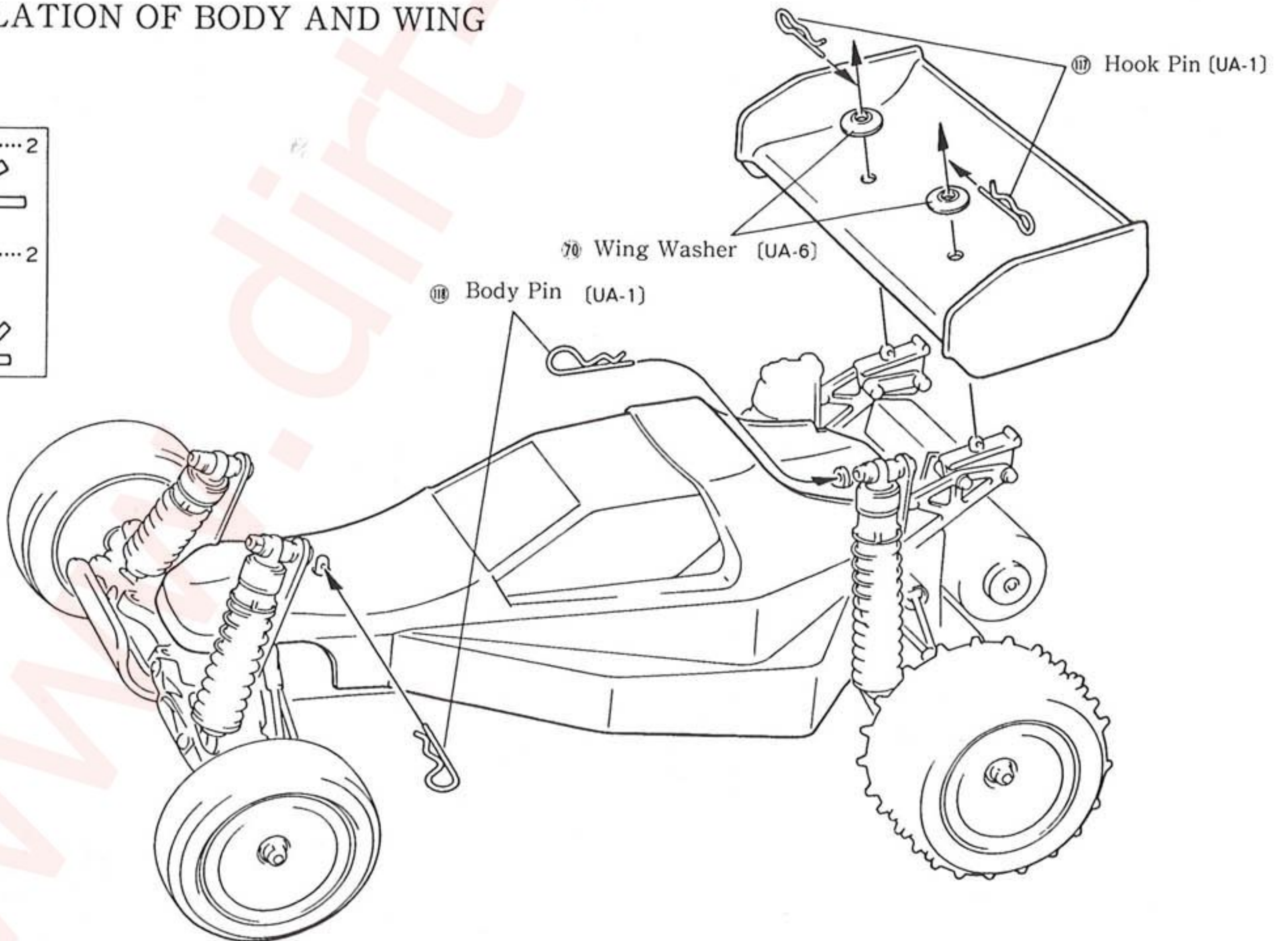
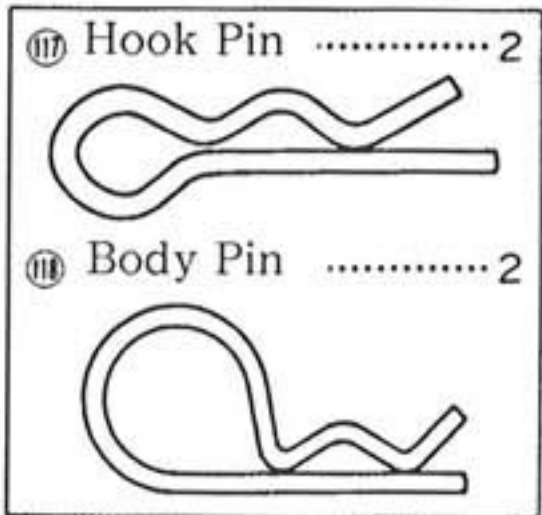


① (Right) ②



③ (Right) ④

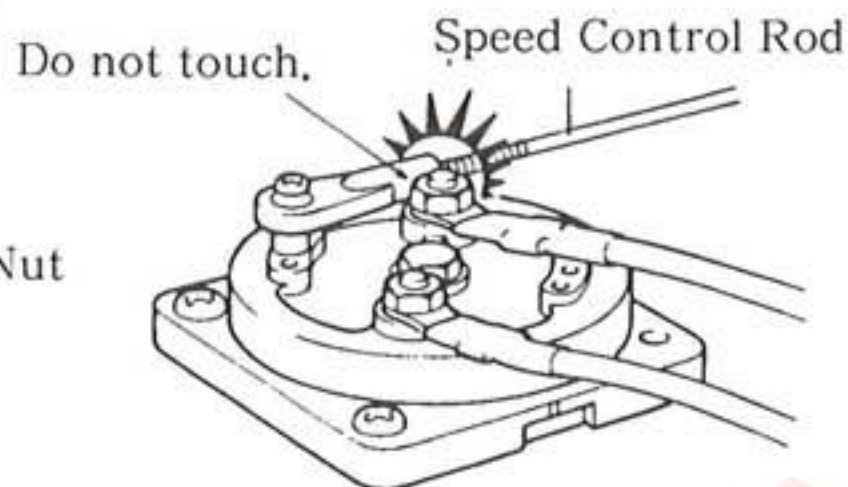
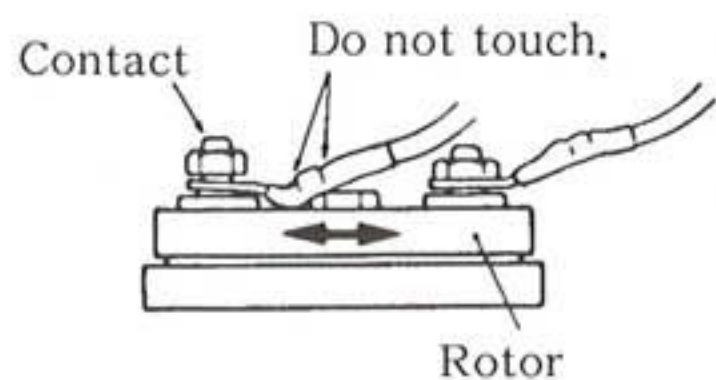
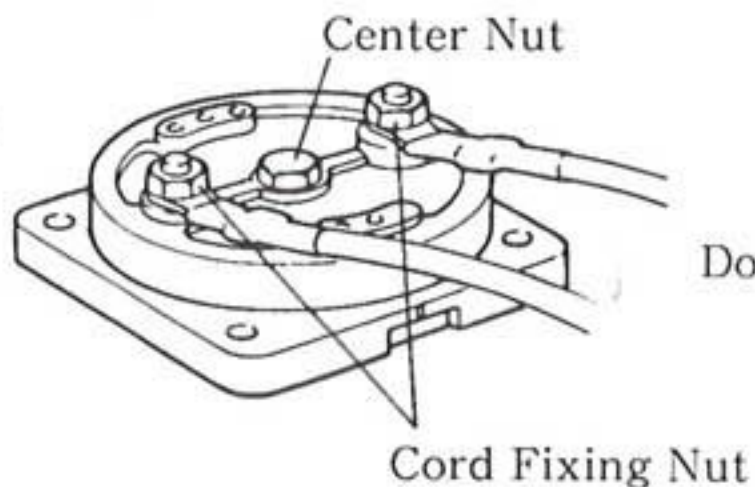
40 INSTALLATION OF BODY AND WING



CHECK BEFORE RUNNING THE CAR

Check the follow steps ①~④.

- ① Check that the center nut and the cord fixing nuts are tightened properly.
- ② When turning the rotor, the cord will hit the rotor or the center nut and, as a result, will force up a contact.
- ③ Or the cord rubs against the body and pushes up a contact.
- ④ The speed control rod will hit a cord fixing nut.



《Maintenance》

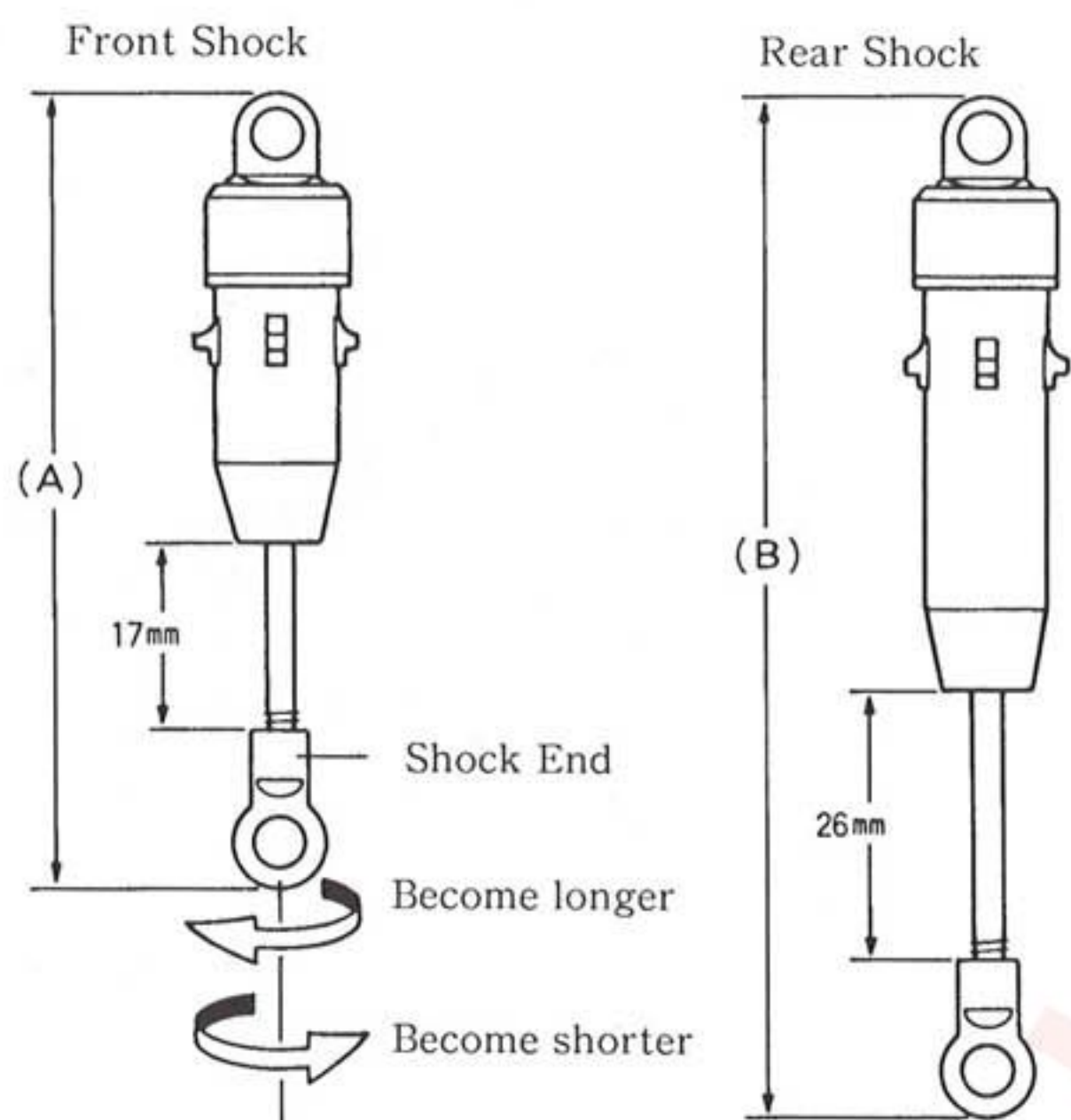
Remove the center nut once in a while and clean the inside of the controller.

* When you notice the uneven running of the motor, check all four checking points ① to ④ listed left.

* If you find all in good condition... In this case, the surface of the controller plate must be worn away considerably.

ADJUSTMENT GUIDE

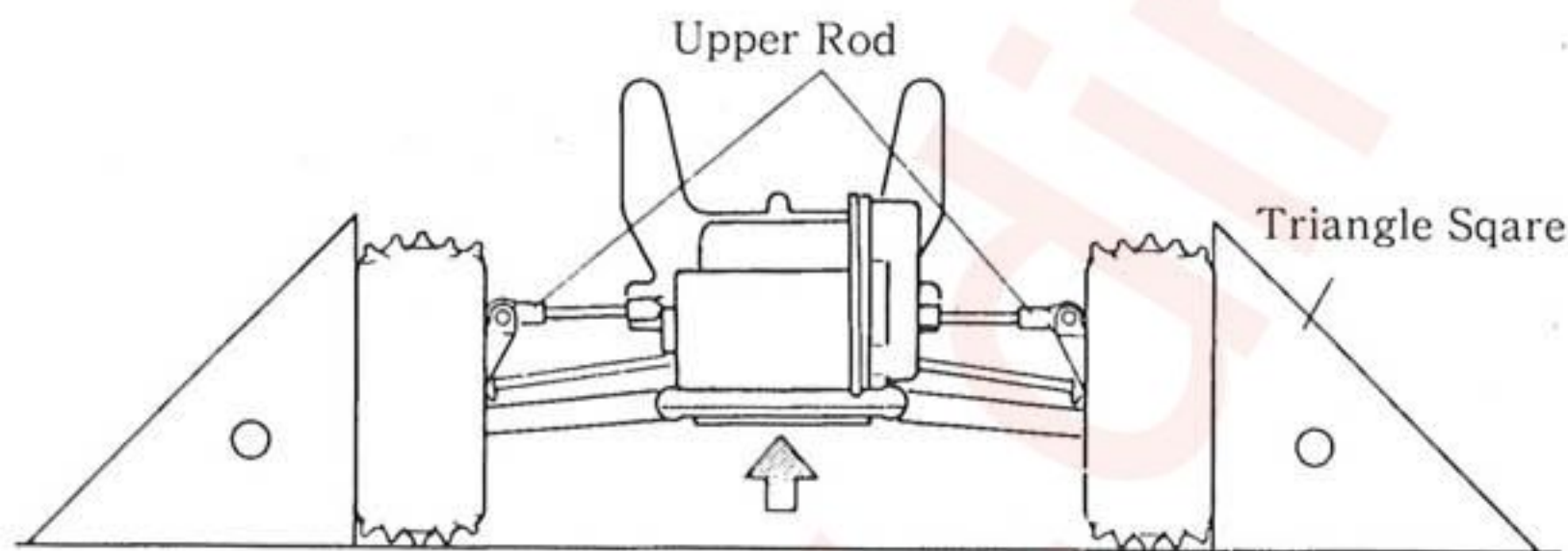
《Basic Setting 1》



Adjust the length by turning the shock end.

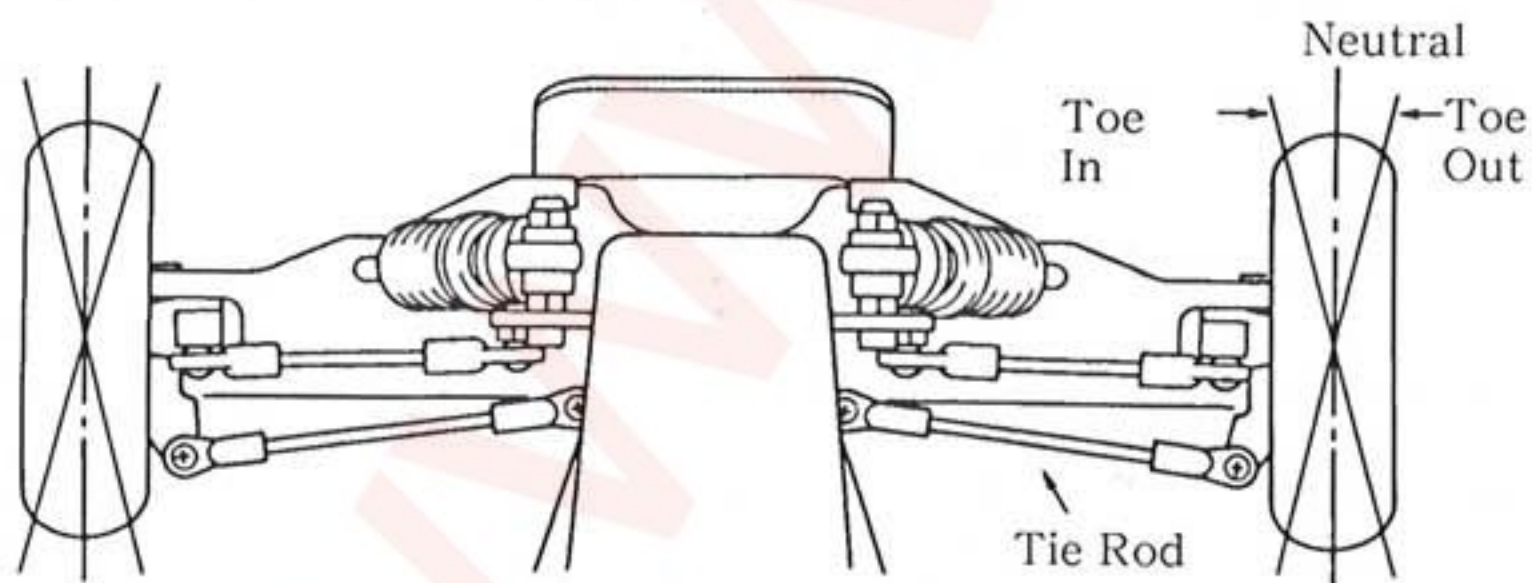
《Basic Setting 2》

Place the car on a flat surface with the chassis raised as high as possible and adjust the length of the front and rear upper rods in a way so that the tires stand at a right angle to the ground.



《Toe Adjustments》

Adjust the tie rods for a slight inward angle.

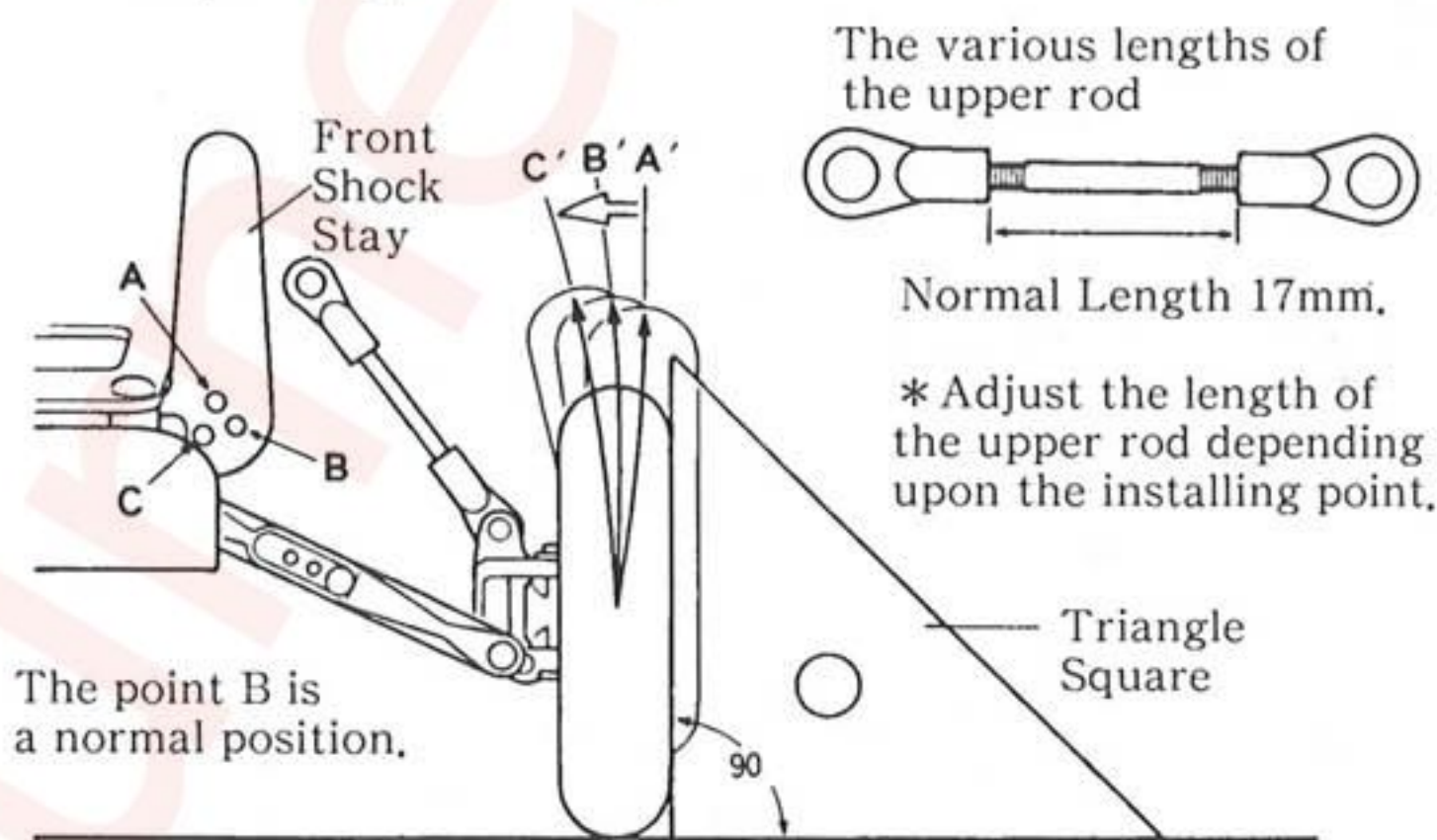


Adjust the tie rod longer. Become toe-in. Slower Response Over Steer

Adjust the tie rod shorter. Become toe-out. Quicker Response Under Steer

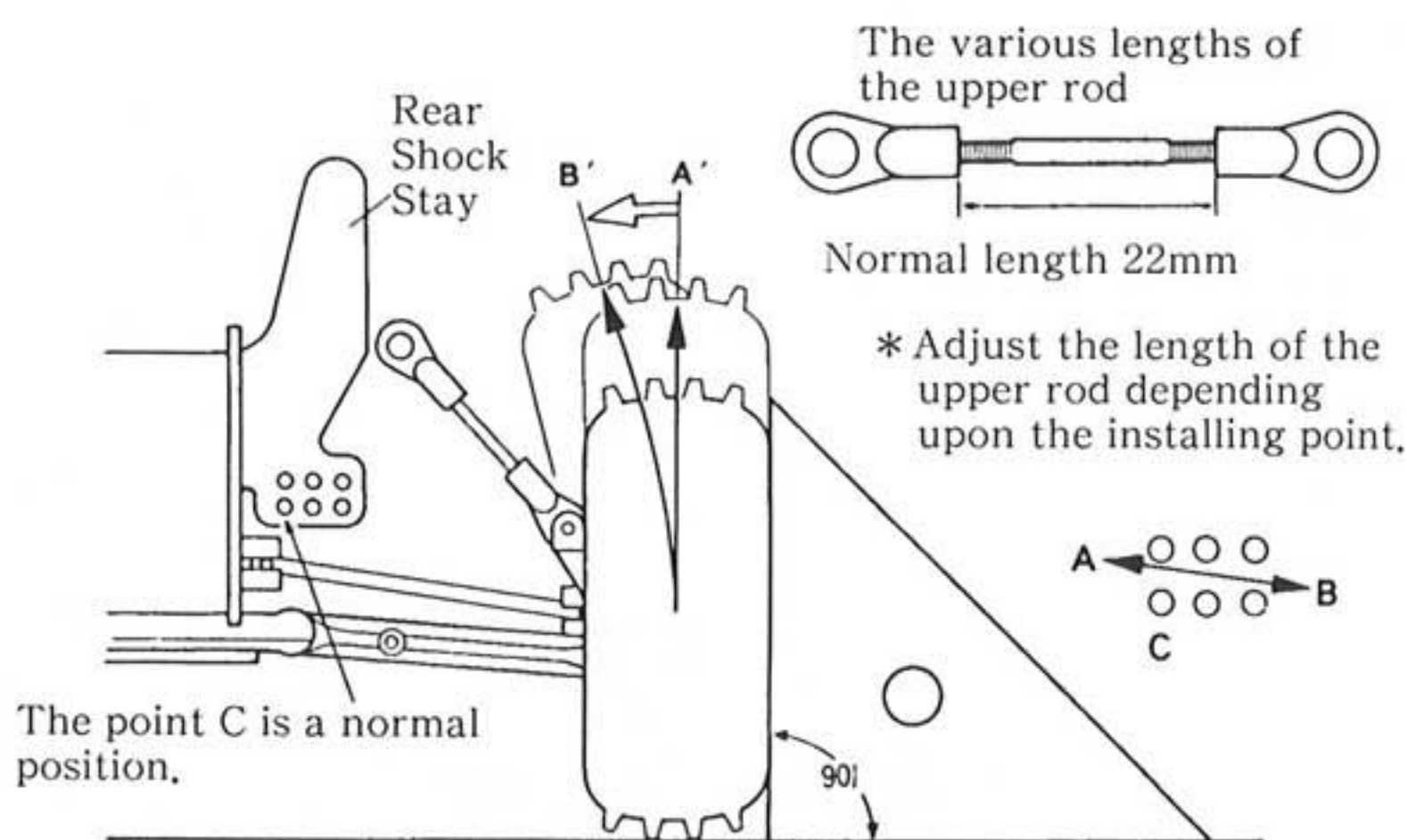
Correlation between installing of Front Upper Rod and Camber Angle.

The installing points A, B and C on the front shock stay for the upper rod correspond to A', B' and C' which are the maximum camber angle when the front suspension arms swing down to the lowest position.



Correlation between installing position of the Rear Upper Rod and Camber Angle.

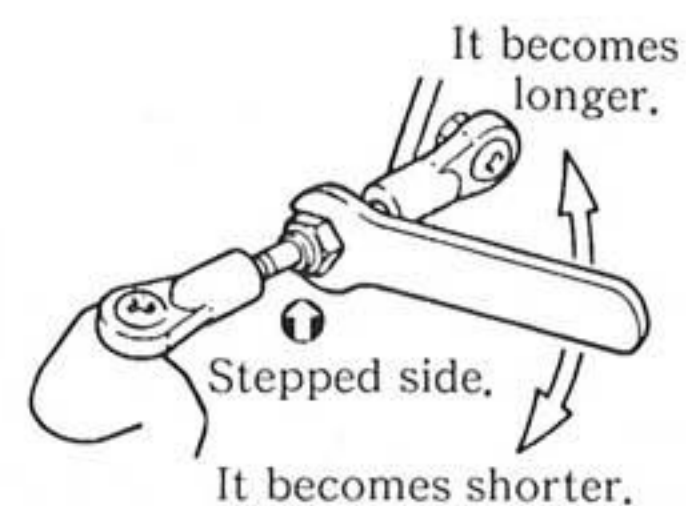
The installing points A and B on the upper rod plate will result in the positions of the rear camber angle A' and B' when the rear suspension arms sink the most.



《Optional Parts》

W5005 Special Rod Set

* Easy adjusting without remove the rod.



ADJUSTMENT GUIDE

《Gear Ratio》

Pinion Gear	13T	14T	15T	16T	17T	18T	19T	20T
GearRatio	9.5	8.8	8.2	7.7	7.3	6.9	6.5	6.2
Effects	Slower	← Top Speed →		Higher				
	Better	← Acceleration →		Reduce				
	Longer	← Run Times →		Shorter				

The above chart is a guide in choosing the best pinion gear for your motor.

《Optional parts》

W-0109	Ball Differential Gear
W-0110	Special Spur Gear
W-0111	Special Counter Gear
W-5085	Hard Pinion Gear (15T~23T) *Use with W-0110
W-5093	

*Gear RatioSpecial Spur Gear with Hard Pinion Gear

Pinion Gear	15T	16T	17T	18T	19T	20T	21T	22T	23T
GearRatio	11.1	10.4	9.8	9.2	8.7	8.3	7.9	7.5	7.2
Effect	Slower	← Top Speed →		Higher					
	Better	← Acceleration →		Reduce					
	Longer	← Run Times →		Shorter					

《Hardness of Shock Action》

No.	Hardness	← Harder → Softer →		
		Yellow Oil	Green Oil	Red Oil
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		

《Adjustment of Shock Oil and Spring》

Front	(Lightweight shock oil Weak spring tension)	→ Sharp steering response
Front	(Heavy shock oil Strong spring tension)	→ Slow steering response
Rear	(Lightweight shock oil Weak spring tension)	→ More wheel traction
Rear	(Heavy shock oil Strong spring tension)	→ Less wheel traction

《Optional Parts》

* Easy adjusting of spring tension.

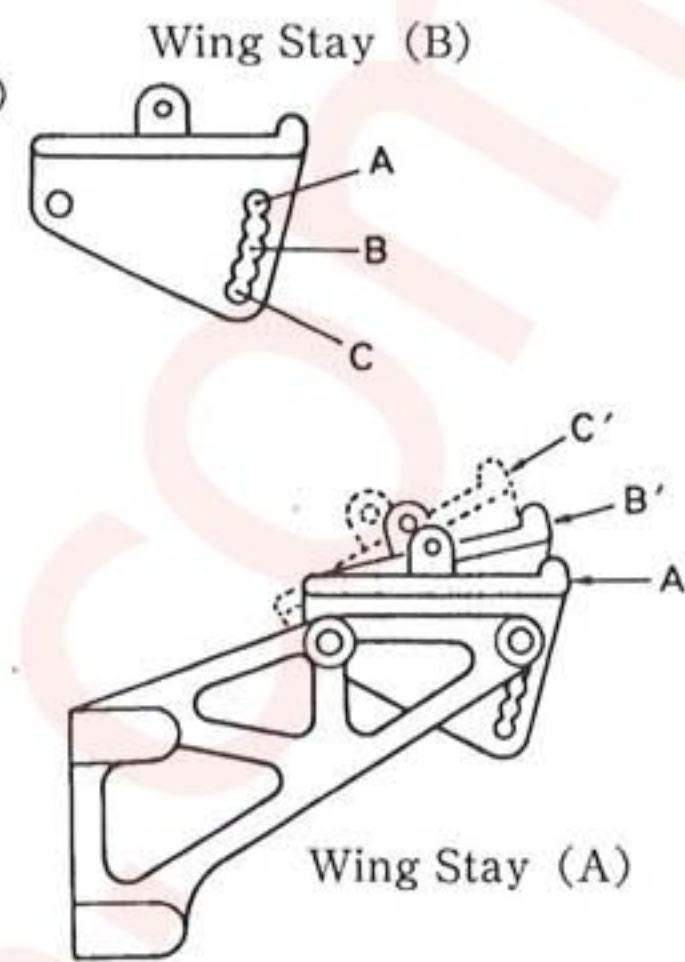
Pressure Oil Shock (S)
(W-5001)

Pressure Oil Shock (L)
(W-5002)



《Adjustment of Wing Stay》

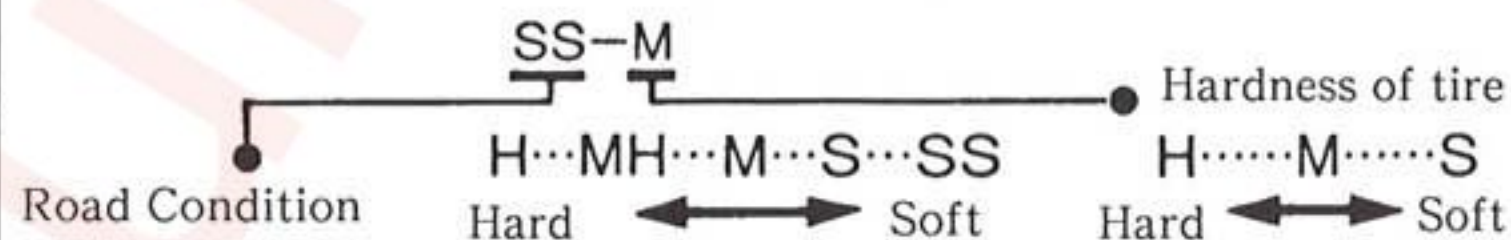
When assembling the wing stay (B) to the wing stay (A), fastening the part to the position A will place the wing stay (B) to A', B to B' and C to C' that is the installation angle becomes bigger in order, A → B → C.



《Setting of Tires》

Any of the tires listed below can be used with the "Ultima II". Choose the one most suitable for the road condition.

For example (Narrow Tire)



Rear Tire

	H	MH	M	S	SS
W5034 Narrow Tire W5031 LowProfile ①					
W5076 Narrow Tire W5078 LowProfile ②					
W5033 Narrow OT-66 LowProfile ③					
W5032 LowProfile ④					
W5075 Narrow Tire W5077 LowProfile ⑤					

- ①...For hard road surface
- ②...Both of them are MH-M
- ③...Both are pin type
- ④...For soft road surface
- ⑤...Both of them are SS-M

Front Tire

	Hard Road Surface	Soft Road Surface
S C -26 Front Tire		
W-5071 Front Tire	M-S	
W-5072	M-H	
S C -90		
W-5074 Front Tire		S-S
W-5075		S-H

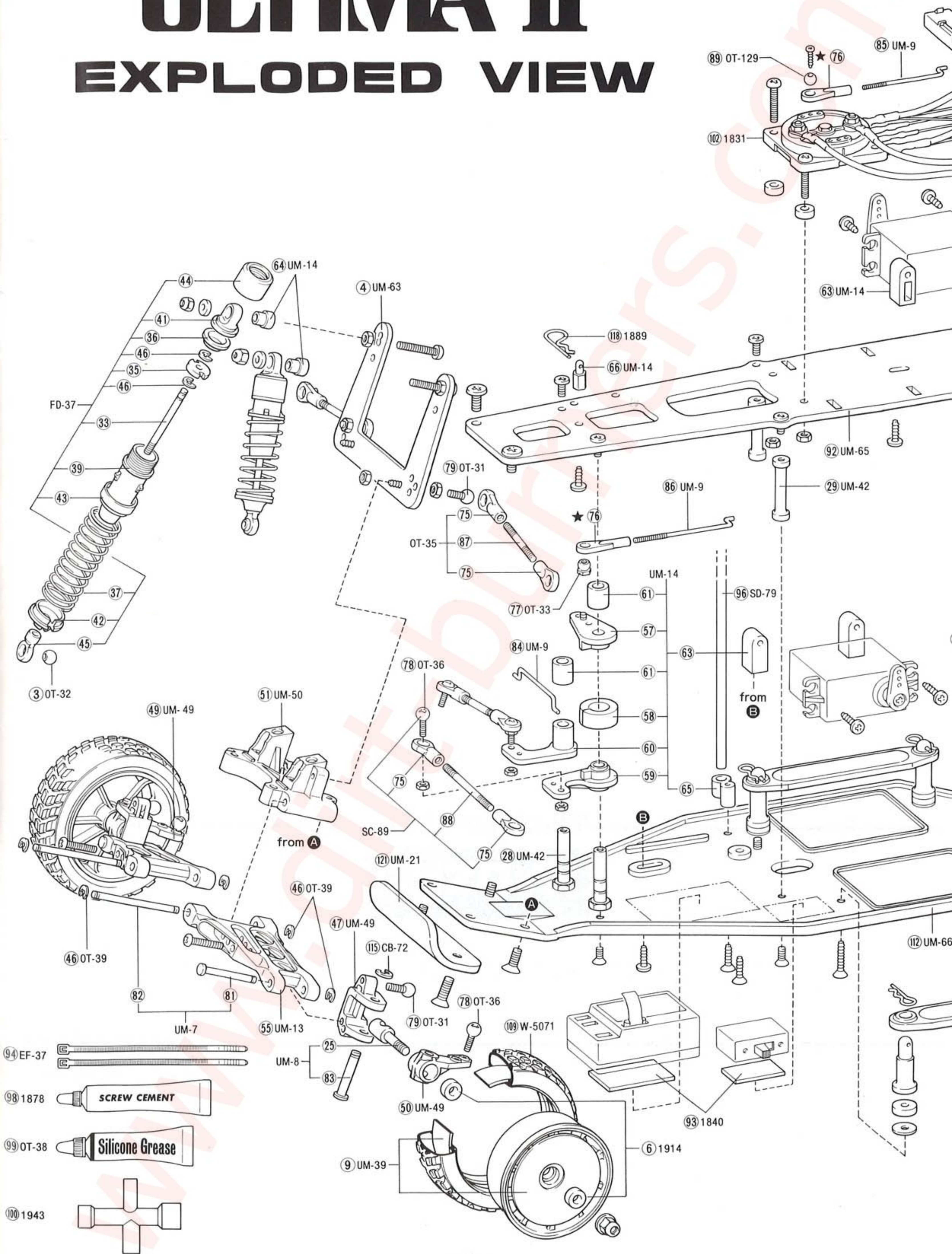
PARTS LIST

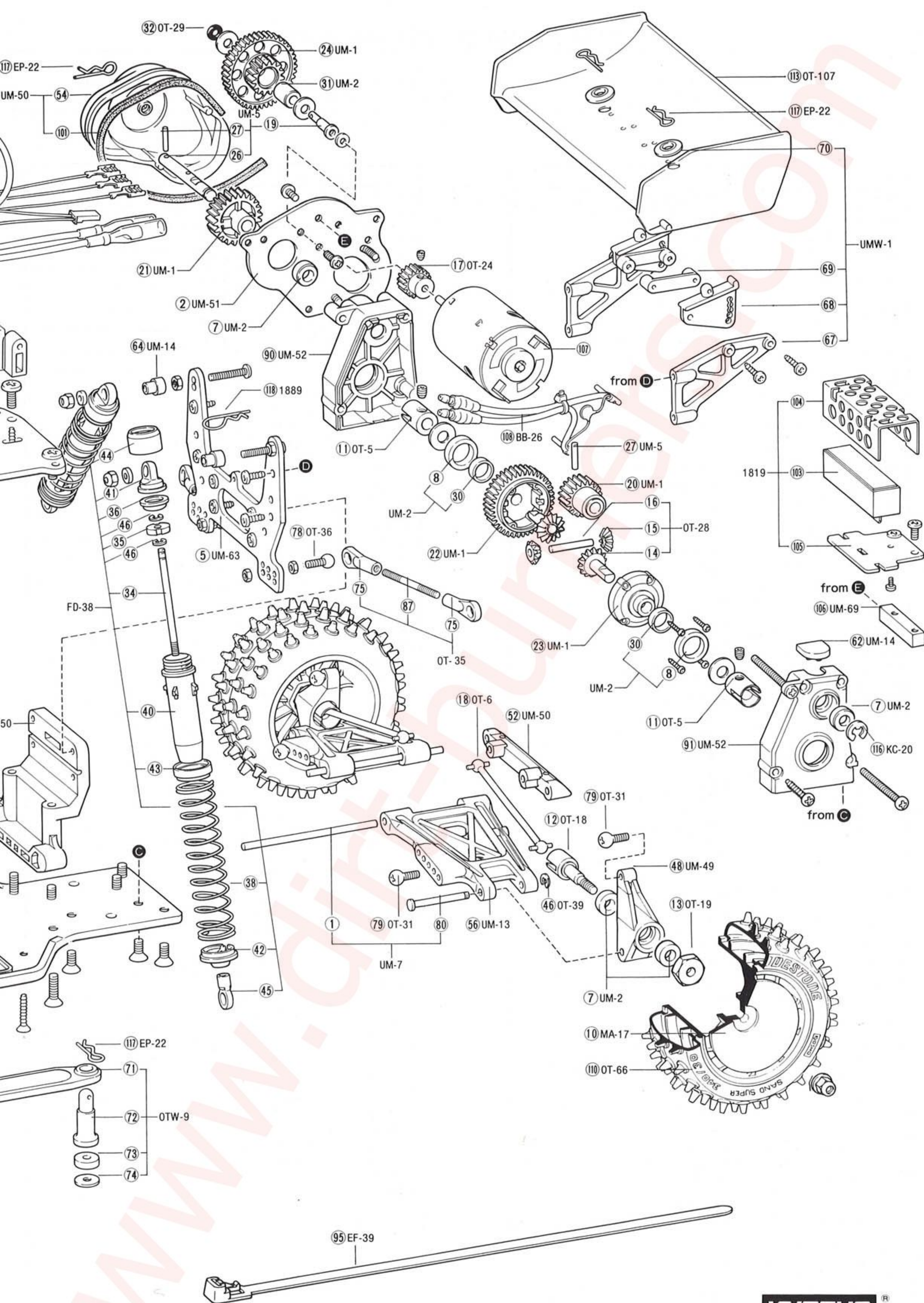
Key No.	Parts Name	Q'ty	Key No.	Parts Name	Q'ty	Key No.	Parts Name	Q'ty	Key No.	Parts Name	Q'ty
①	Sus. Shaft (B)	.....2	④①	Rear Shock Case	.....2	⑦⑨	M3 Pillow Ball (Silver)	.....8	⑩⑧	Body Pin	.....2
②	Motor Plate	.....1	④②	Shock Cap	.....4	⑧①	Sus. Shaft (A) (Black)	.....2	⑩⑨	Hex Key (1.5)	.....1
③	5.8 φ Ball (Silver)	.....2	④③	Spring Holder	.....4	⑧②	" (C) (Silver)	.....2	⑩⑩	Hex Key (2)	.....1
④	Front Shock Stay	.....1	④④	Spring Spacer	.....4	⑧③	" (D)	.....2	⑩⑪	Bumper	.....1
⑤	Rear Shock Stay	.....1	④⑤	Shock Ring	.....4	⑧④	King Pin	.....2			
⑥	4 φ x8 Metal Bushing	.....4	④⑥	Shock End	.....4	⑧⑤	Center Rod	.....1			
⑦	5 φ x10 "	.....6	④⑦	E Ring (E2.5)	.....18	⑧⑥	Speed Control Rod	.....1			
⑧	10 φ x14 "	.....2	④⑧	Front Hub	.....2	⑧⑦	Steering Rod	.....1			
⑨	Front Wheel	.....2	④⑨	Rear Hub	.....2	⑧⑧	Rod (S)	.....4			
⑩	Rear Wheel	.....2	④⑩	Knuckle Arm (R)	.....1	⑧⑨	Rod (L)	.....2	RH Screw	M2×4	.....1
⑪	Joint	.....2	④⑪	" (L)	.....1	⑧⑩	4.8 φ Ball	.....1	" "	M3×16	.....4
⑫	Rear Wheel Shaft	.....2	④⑫	Front Bulk Head	.....1	⑧⑪	Gear Box (R)	.....1	" "	M3×33	.....3
⑬	Drive Washer	.....2	④⑬	Rear Axle Stopper	.....1	⑧⑫	" (L)	.....1	Bind Screw	M2.6×6	.....1
⑭	Bevel Gear (A)	.....2	④⑭	Rear Bulk Head	.....1	⑧⑬	Radio Plate	.....1	" "	M3×6	.....10
⑮	" (B)	.....2	④⑮	Gear Cover	.....1	⑧⑭	Double Sided Tape	.....1	" "	M3×18	.....4
⑯	Bevel Shaft	.....1	④⑯	Front Sus. Arm	.....2	⑧⑮	Strap (S)	.....2	" "	M3×35	.....1
⑰	Pinion Gear (15T)	.....1	④⑰	Rear "	.....2	⑧⑯	NiCd Strap	.....2	" "	M4×8	.....4
⑱	Swing Shaft	.....2	④⑱	Servo Saver (A)	.....1	⑧⑰	Antenna Pipe	.....1	FH Screw	M3×6	.....4
⑲	Center Gear Shaft	.....1	④⑲	" (B)	.....1	⑧⑱	Shock Oil (Green)	.....1	" "	M4×8	.....8
⑳	Final Pinion Gear	.....1	④㉑	" (C)	.....1	⑧㉑	Screw Locking Compound	.....1	" "	M4×12	.....4
㉑	Counter Gear	.....1	④㉒	" (D)	.....1	⑧㉒	Silicone Grease	.....1	TP RH Screw	M2×8	.....1
㉒	Main Gear	.....1	④㉓	Servo Saver Collar	.....2	⑧㉓	Cross Wrench	.....1	" "	M2×10	.....4
㉓	Diff. Case	.....1	④㉔	Gear Box Hatch	.....1	⑧㉔	Gear Cover Seal	.....1	" "	M3×18	.....1
㉔	Center Gear	.....1	④㉕	Servo Stay	.....4	⑧㉕	Rotary Speed Controller	.....1	TP Bind Screw	M2.6×12	.....4
㉕	Front Wheel Shaft	.....2	④㉖	Shock Collar	.....4	⑧㉖	15W Resistor	.....1	" "	M3×8	.....18
㉖	Counter Gear Shaft	.....1	④㉗	Antenna Post	.....1	⑧㉗	Resistor Heatsink	.....1	" "	M3×10	.....3
㉗	2 φ x11 Pin	.....3	④㉘	Body Hook	.....1	⑧㉘	Resistor Base	.....1	TP FH Screw	M3×10	.....2
㉘	Servo Saver Shaft	.....2	④㉙	Wing Stay (A)	.....2	⑧㉙	Resistor Stay	.....1	" "	M3×15	.....5
㉙	Radio Plate Post	.....2	④㉚	" (B)	.....2	⑧㉚	Le Mans Stock 05 Motor	.....1	Set Screw	M3×3	.....1
㉚	Metal Collar	.....2	④㉛	" (C)	.....2	⑧㉛	Motor Cord	.....1	" "	M4×4	.....2
㉛	Center Gear Metal	.....1	④㉜	Wing Washer	.....2	⑧㉜	Front Tire	.....2	Nut	M2.6	.....8
㉜	O Ring (Black)	.....1	④㉝	Battery Stopper	.....2	⑧㉝	Rear Tire	.....2	" "	M3	.....10
㉝	Front Shock Shaft	.....2	④㉞	Stopper Post	.....4	⑧㉞	Body	.....1	Nylon Nut	M3	.....4
㉞	Rear "	.....2	④㉟	Stopper Washer (Thin)	.....4	⑧㉟	Main Chassis	.....1	" "	M4	.....4
㉟	Shock Piston	.....4	④㊱	" (Thick)	.....4	⑧㊱	Wing	.....1	Washer	M3	.....1
㊱	Pressure Top	.....4	④㊲	5.8 φ Ball End	.....12	⑧㊲	Decal	.....1	" "	M4	.....2
㊲	Front Shock Spring (Black)	.....2	④㊳	4.8 φ "	.....2	⑧㊳	E Ring (E3)	.....2	" "	M5	.....2
㊳	Rear " (Gold)	.....2	④㊴	Ball Nut	.....1	⑧㊴	E Ring (E4)	.....1			
㊴	Front Shock Case	.....2	④㊵	M2.6 Pillow Ball (Black)	.....6	⑧㊵	Hook Pin	.....7			

MEMO

ULTIMA II

EXPLODED VIEW





PURCHASABLE PARTS FOR YOUR KIT

You can purchase replacement and optional parts for your kit. All of the parts identified by key numbers 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 that part within the manual. Then consult our parts pack guide below. When referring to the parts you need, always use the Parts Pack Number. For instance, if you need a Chassis (Key #112) ask your dealer for Kyosho Part Pack UM-66.

No.	Parts Name	Key # & Q'ty
UM-1	Gear Set	20 21 22 23 24 X 1
UM-2	Metal Bushing Set	31 X 1 38 30 X 2 7 X 6
UM-5	Gear Shaft Set	19 26 X 1 27 X 2
UM-7	Sus. Shaft Set	1 80 81 82 X 2
UM-8	Front Shaft Set	25 83 X 2
UM-9	Rod Set	84 85 86 X 1 76 X 2
UM-13	Sus. Arm Set	55 56 X 2
UM-14	Servo Saver Set	57 58 59 60 62 65 66 X 1 61 X 2 63 64 X 4
UM-21	Front Bumper	10 X 1
UM-34	Body	10 X 1
UM-39	Front Wheel Yellow	9 X 2
UM-42	Saver Shaft Set	28 29 X 2
UM-49	Up Right Set	49 50 X 1 47 48 X 2
UM-50	Bulk Head Set	51 52 53 54 10 X 1
UM-51	Motor Plate	2 X 1
UM-52	Gear Box	90 91 X 1
UM-63	Shock Stay Set	4 5 X 1
UM-65	Upper Plate	92 X 1
UM-66	Main Chassis	102 X 1
UM-67	Decal Ultima II	10 X 1
UM-68	Screw Set Ultima II	Screws, Nuts, Wrenches
UM-69	Resistor Stay	96 X 1
UMW-1	Wing Stay Set	67 68 69 X 2 70 X 4
OT-5	Joint	11 X 2
OT-6	Swing Shaft	18 X 2
OT-18	Rear Shaft	12 X 2
OT-19	Drive Washer	13 X 4
OT-24	Pinion Gear (15T)	17 X 1
OT-28	Diff. Gear Set	16 X 2 14 15 X 4
OT-29	O Ring	32 X 10
OT-31	M3 Pillow Ball	79 X 10
OT-32	5.8 φ Ball	3 X 10
OT-33	M2.6 Ball Nut	77 X 10
OT-35	Upper Rod Set	76 87 X 4 75 X 8
OT-36	M2.6 Pillow Ball	78 X 10
OT-38	Silicone Grease	99 X 1
OT-39	E Ring (E2.5)	46 X 10
OT-66	Low Profile Tire	108 X 2 Pin Type
OT-107	Wing	103 X 1
OT-129	Linkage Set	76 X 2 89 X 1
OTW-9	Plastic Parts Set	71 X 2 72 73 74 X 4
FD-37	Black Shock (S)	33 35 36 37 39 41 42 43 44 45 X 2 46 X 4
FD-38	• (L)	34 35 36 38 40 41 42 43 44 45 X 2 46 X 4
W-5071	Front Tire M-S	108 X 2
1819	15W Resistor	101 104 105 X 1
1831	Rotary Controller	10 X 1
1840	Double Sided Tape	93 X 1
1878	Screw Locking Compound	98 2 pcs.
1889	Body Pin	10 X 5
1914	4 φ x8 Metal Bushing	6 X 10
1943	Cross Wrench	10 X 1
SC-89	Tie Rod	88 X 2 75 78 X 4

No.	Parts Name	Key # & Q'ty
EP-22	Hook Pin	10 X 5
MA-17	Wheel Set	10 X 4 Aero Dish Yellow
EF-37	Strap (S)	94 X 6
EF-39	NiCd Strap	95 X 6
SD-79	Antenna	96 X 5
CB-72	E Ring (E3)	15 X 4
KC-20	E Ring (E4)	16 X 4
BB-26	Motor Cord	100 1 set
Optional Parts		
OT-50	Pinion Gear (13T)	Gear Ratio 9.5 : 1
OT-51	• (14T)	• 8.8 : 1
OT-52	• (16T)	• 7.7 : 1
OT-53	• (17T)	• 7.3 : 1
UM-23	• (18T)	• 6.9 : 1
UM-24	• (19T)	• 6.5 : 1
UM-25	• (20T)	• 6.2 : 1
UM-26	Special Shock Stay	FRP (Front & Rear)
UM-28	Motor Guard	Aluminum
UM-29	Stabilizer Set	
SC-26	Front Tire	
SC-90	•	
1883	Frontier Hobby Oil	30cc
1901	Ball Bearing(5φ X10)	2pcs, for Rear Hub, Gear Box
1903	• (4φ X8)	2pcs, for Center Gear & Front Wheel
1911	• (8φ X14)	2pcs, for Diff. Gear
1951	Shock Oil (S·M·H)	Soft, Medium, Hard
1953	Silicone Oil (S)	Soft
1954	• (M)	Medium
1955	• (H)	Hard
W-0109	Ball Differential Gear	Easy Adjusting
W-0110	Special Spur Gear	
W-0111	Special Counter Gear	
W-5001	Pressure Shock (S)	High Quality
W-5002	• (L)	•
W-5003	Adjustable Shocks(S)	Easy Adjusting
W-5004	• (L)	•
W-5005	Special Rod Set	Easy Adjusting
W-5031	Low Profile Tire	Hard Road Surface
W-5032	•	Soft Road Surface
W-5061	Universal Swing Shaft	
W-5072	Front Tire M-H	
W-5073	• S-S	
W-5074	• S-H	
W-5077	Low Profile S S-M	
W-5078	• MH-M	
W-5085	Hard Pinion Gear	
W-5093	(15T~23T)	

The Super Hobby



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

PRINTED IN JAPAN

ABF2.5T