

RADIO CONTROLLED ELECTRIC POWERED SPECIAL RACING BUGGY

**4WD OFF-ROAD RACER**

**LAZER**

**ZX-SPORT**

- HIGH-PERFORMANCE 4WD RACING BUGGY WITH MOST FEATURES OF THE ALL-OUT ZX-R VERSION EASY UPGRANCE AS SKILL LEVEL IMPROVES.
- EFFICIENT, LIGHT AND RELIABLE FOUR-WHEEL DRIVE BY TOOTHED BELTS. AND DUAL DIFFS.
- LONG-TRAVEL OPTIMUM-GEOMETRY ALL-INDEPENDENT SUSPENSION SYSTEM WITH HIGH-QUALITY OIL-FILLED PRESSURE TYPE SHOCK ABSORBERS.
- HIGH-GRIP LOW-PROFILE PIN-SPIKE TIRES FOR GREAT TRACTION ON ALL SURFACES.
- KIT INCLUDES PEPPY LeMANS STOCK 05 MOTOR AND HIGH-QUALITY ROTARY SPEED CONTROLLER.

**1:10 SCALE**



**KYOSHO**<sup>®</sup>  
THE FINEST RADIO CONTROL MODELS  
KIT NO.3148

BELT DRIVE  
**4WD**

\*\*\*\*\*

# BEFORE YOU BEGIN ASSEMBLY!

\*\*\*\*\*

Thank you for purchasing the Kyosho's R/C "1/10 EP 4WD Car".

In order to keep your Car in top condition to enjoy the most pleasure from the R/C world, you should thoroughly read this instruction manual and the operation instruction of the radio control units to keep the correct way of assembling.

## 《 Kit Features 》

This instruction manual is a common instruction manual of 4WD Buggy Car and 4WD Scale Car to assemble the chassis portion.

Another instruction is the double organization.

{ A matter to except the common instruction on assembly and the body explanation to assemble. }

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## 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.



Instruction

- 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" (page 2,3). 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.



(Another instruction)

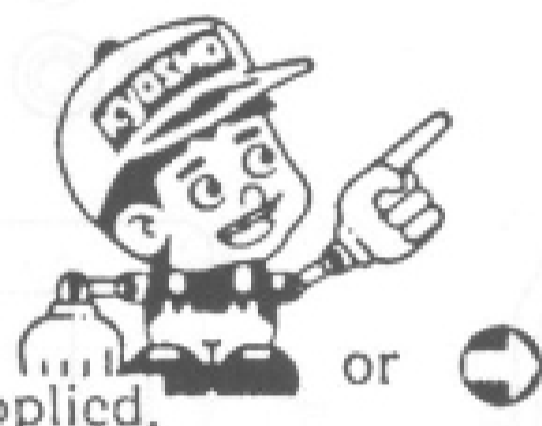
Bagged Parts List

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.

**SWCEMENT** ... Place to put some locktite.  
(It will prevent the screws and nuts to get loosen by vibration while running)

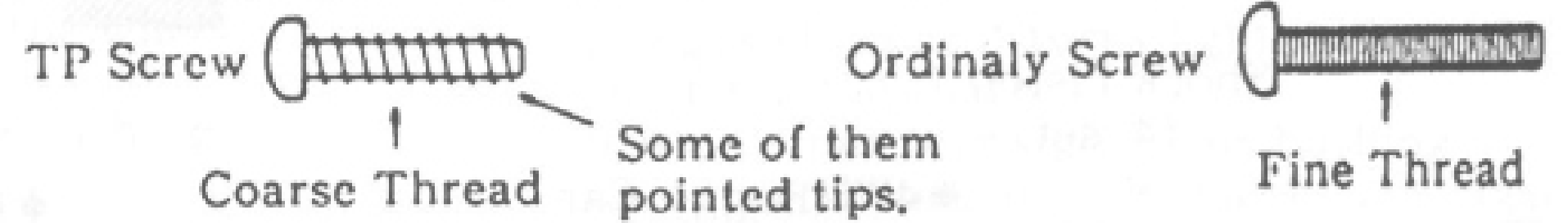
**GREASE** ..... Point where grease should applied.  
(It will reduce friction and assure smooth movements.)



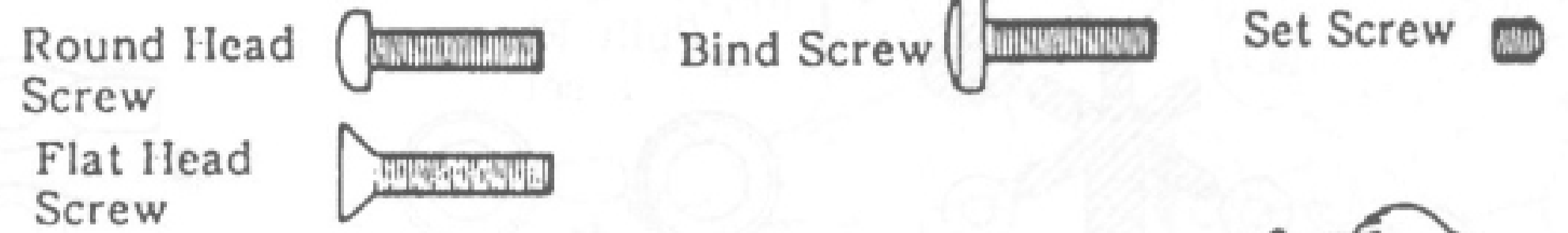
Steps where your particular attention is required.

- 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...

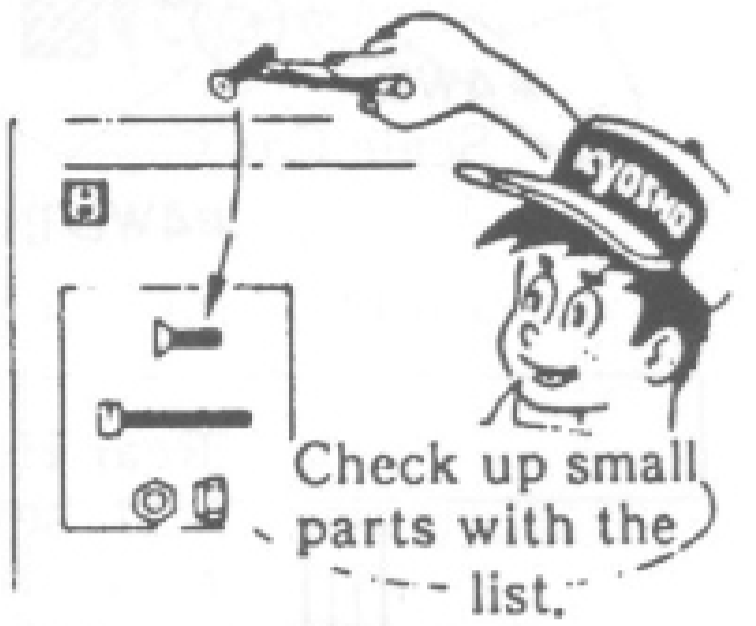


2) The kinds of screws which will be used in this instruction.



( There are two kinds of thread, fine and coarse 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.

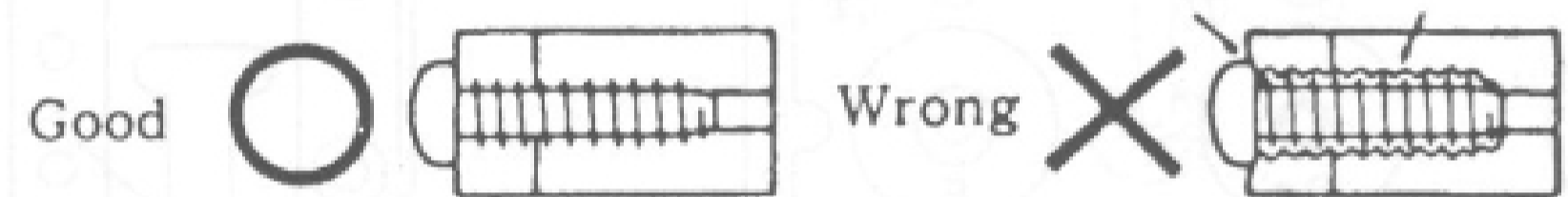
Double-check the location and direction of parts with the illustration before installation. When necessary, assemble the parts themselves tentatively before proceeding to the next step.



- Do not tighten the self-tapping screw too tight.

Do not use excessive force when tightening the self-tapping 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.



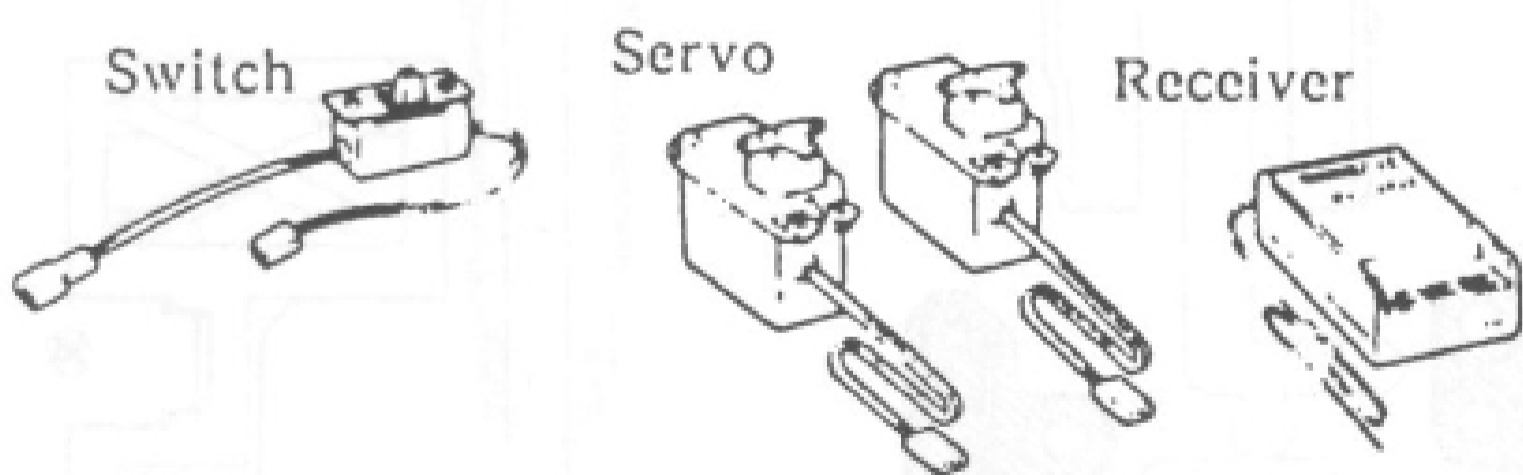
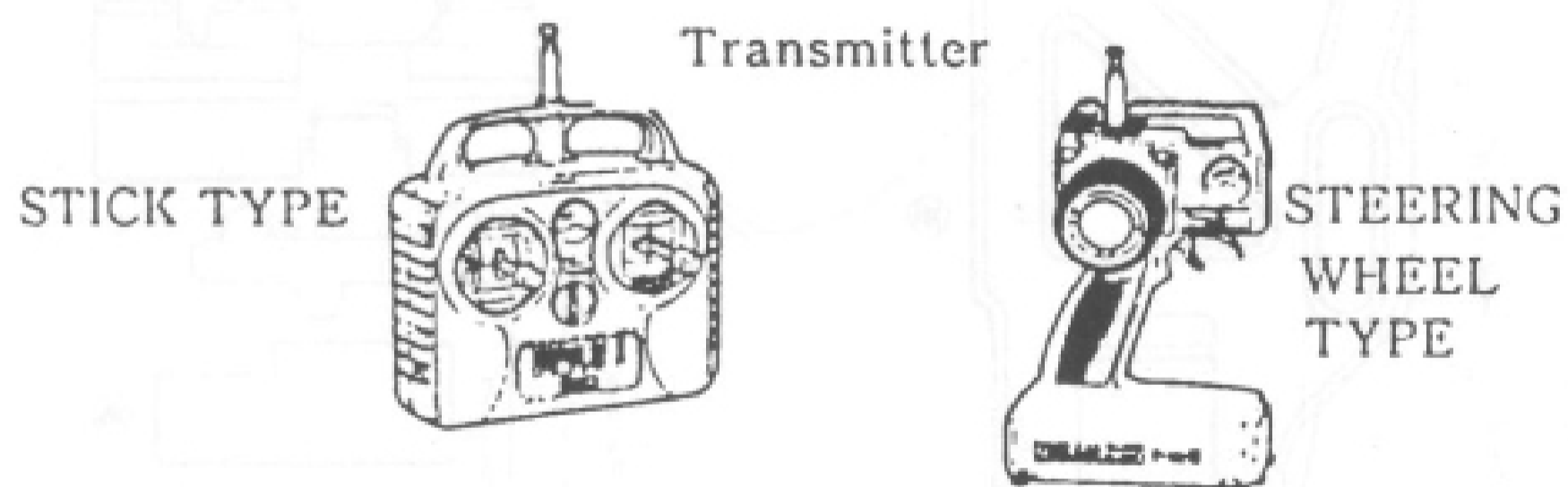
## THINGS NEED BESIDES THE KIT

< 2 Channel Radio System >



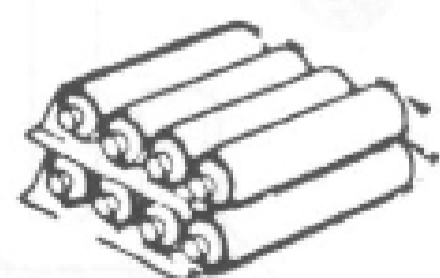
This model is designed to use BEC system radio. A radio contained in a box with this type of logo is a BEC type radio.

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



< Battery for Radio System >

For Transmitter...8pcs.



< Ni-Cd Battery >

This model is designed to use below the battery.

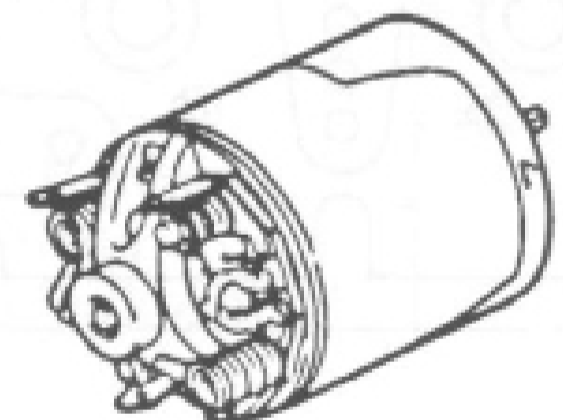


< Motor >

7.2V-1400

This model is with a motor. A Le Mans series type motor is recommended for top performance.

- Le Mans Pro High Torque
- Le Mans Pro HighSpeed



< Charger for Ni-Cd Battery >

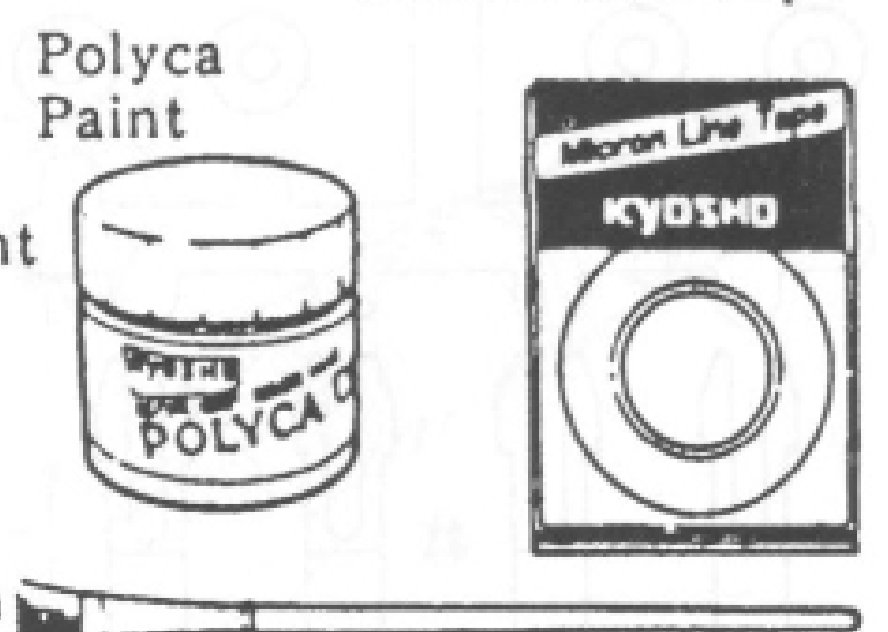
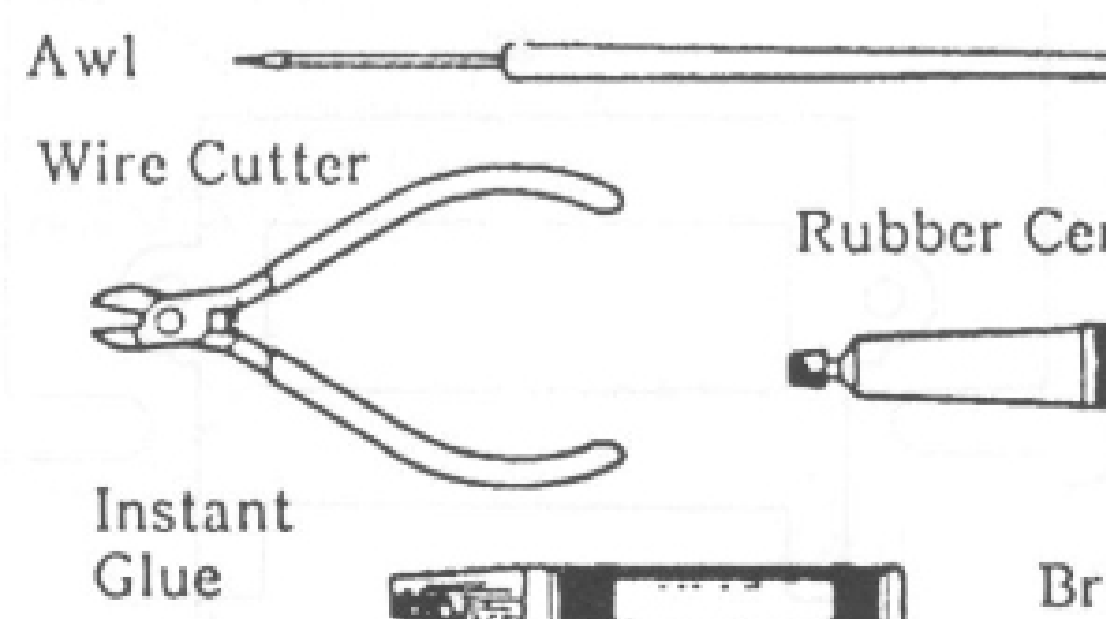
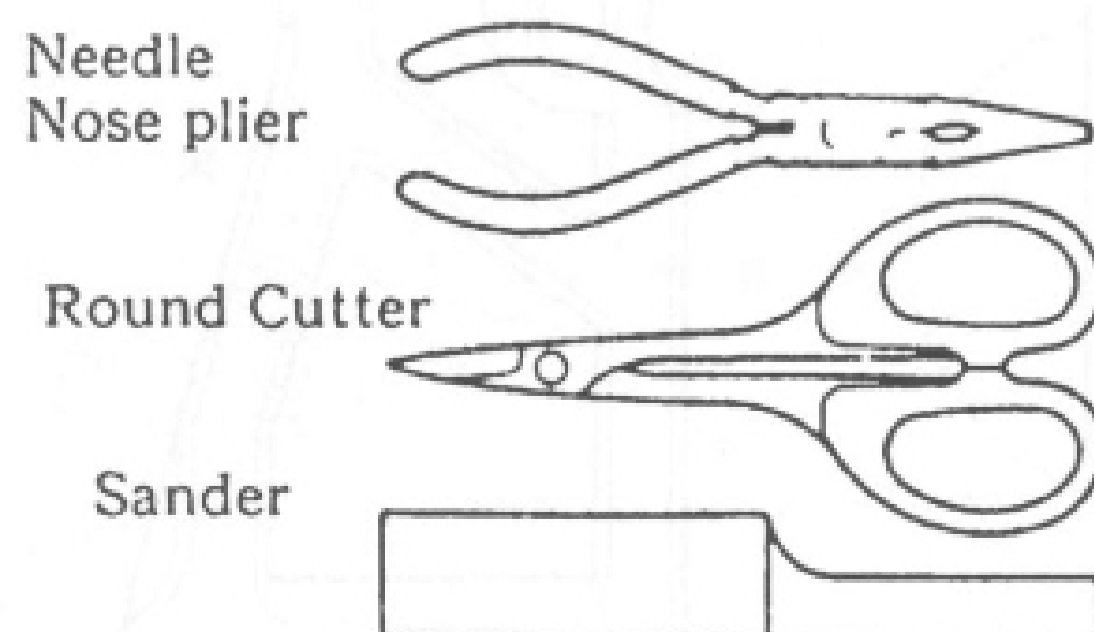
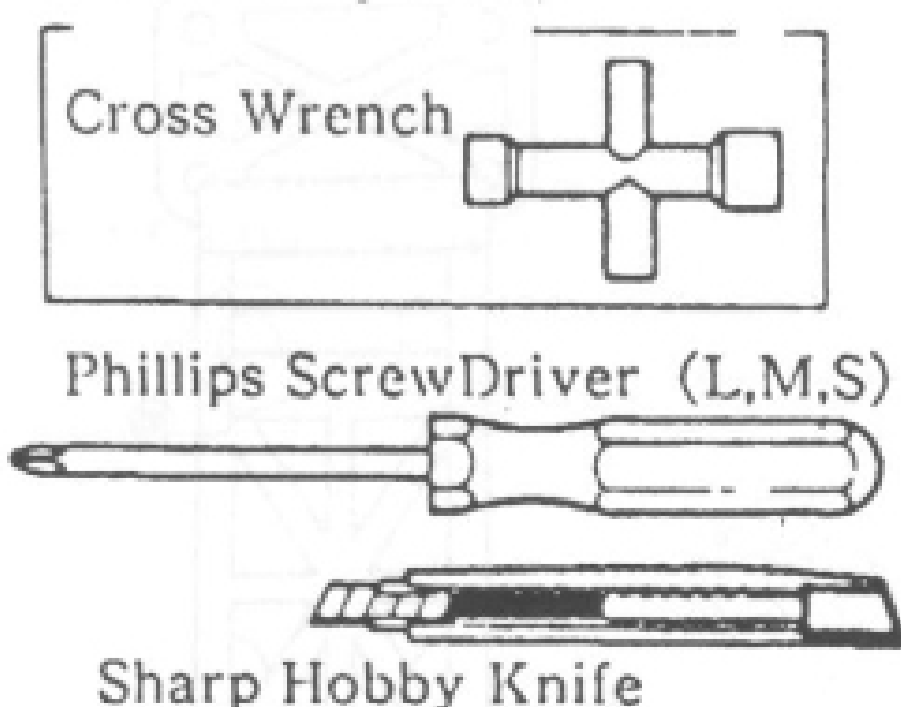
The Kyosho's Ni-Cd Battery is of high performance. If it is charged correctly, it will operate for a considerable period of time.

Use one of the Chargers listed below which suits your need.

No.	Name	Time	Rate	Features
2326	7.2V Power Charger (DC12V)	15 min.	70%	For Beginners Built-in Timer
1849	Multi Charger II (DC12V)	20 min.	100%	Timer, Ammeter built-in
2246	FET Auto-Charger (DC12V)	20-30 min.	100%	Trickle Charging Automatic cut-off at peak of charge

< Tools Required >

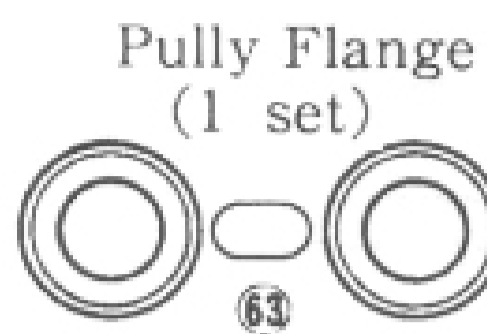
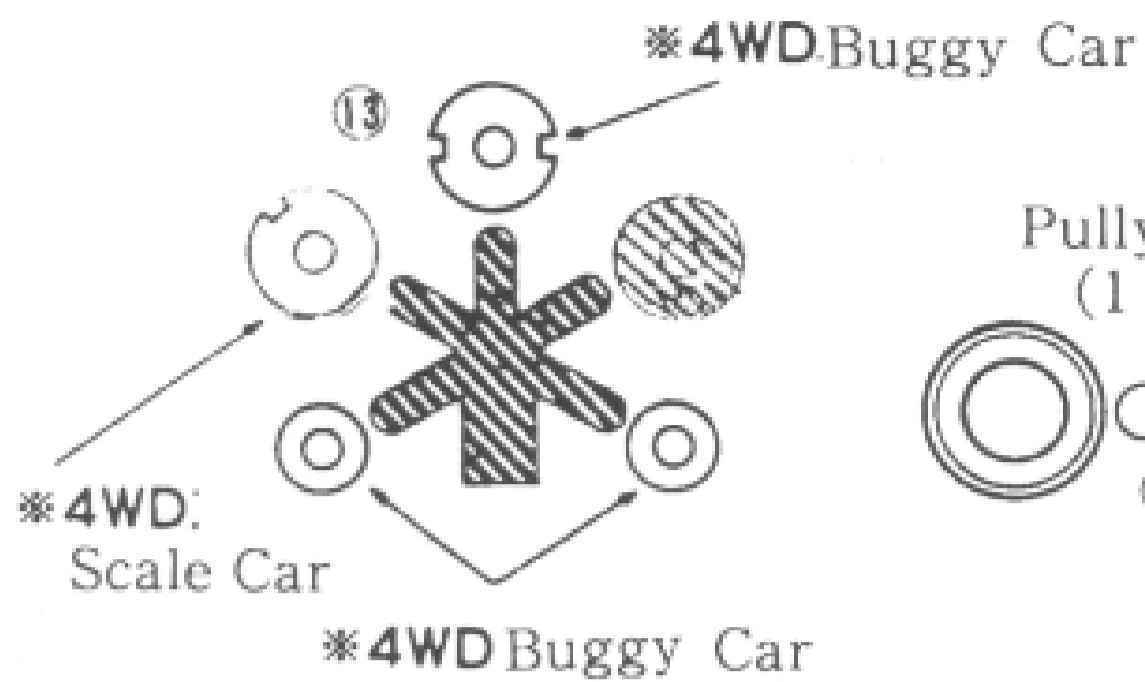
Allen Wrench, Cross Wrench, Grease and Screw Locking Compound are in the kit.



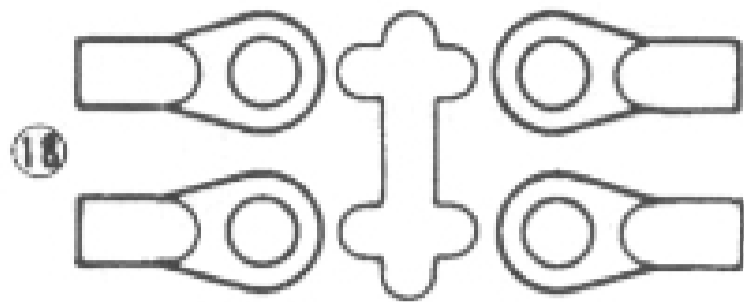
# LAYOUT DRAWING OF PLASTIC PARTS ON RUNNERS

 These shaded parts are not used.

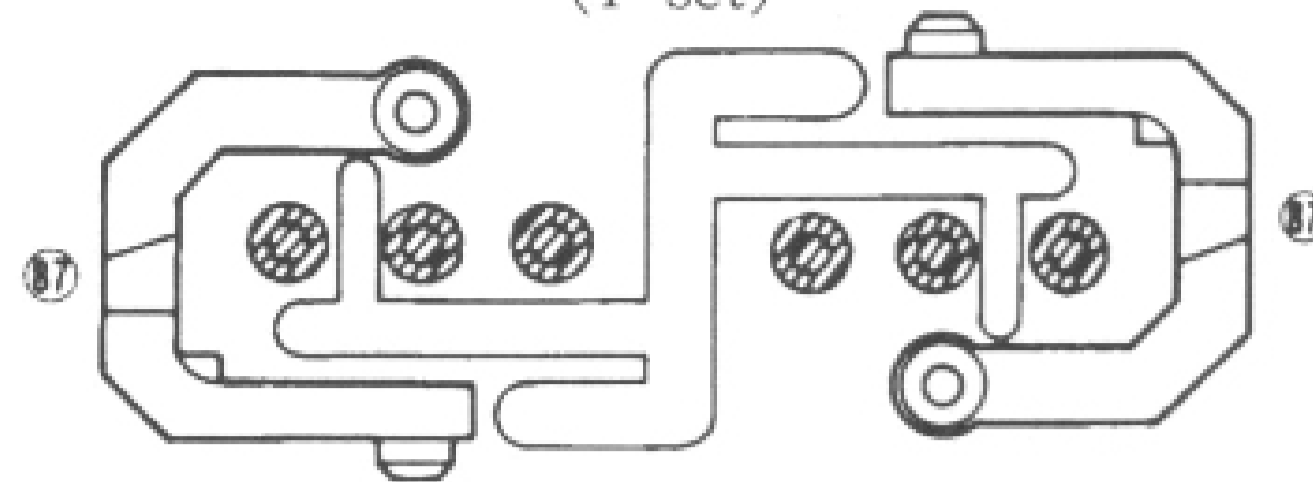
Shock Piston  
(4 set)



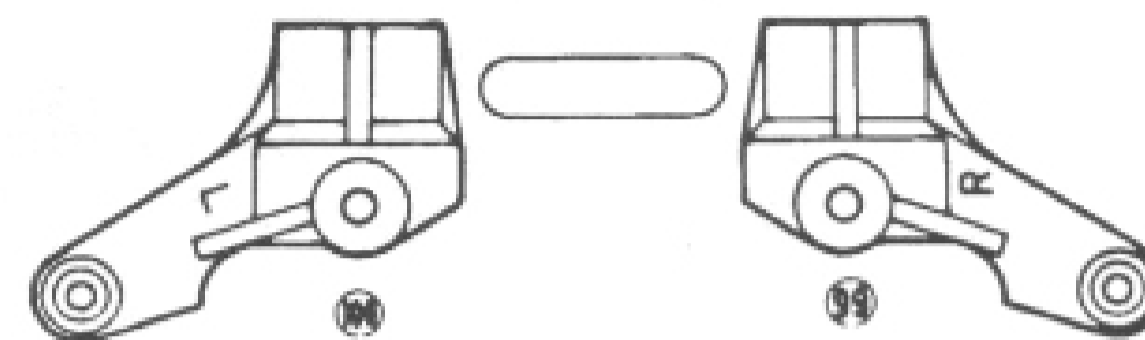
φ5.8: Ball End  
(3 set)



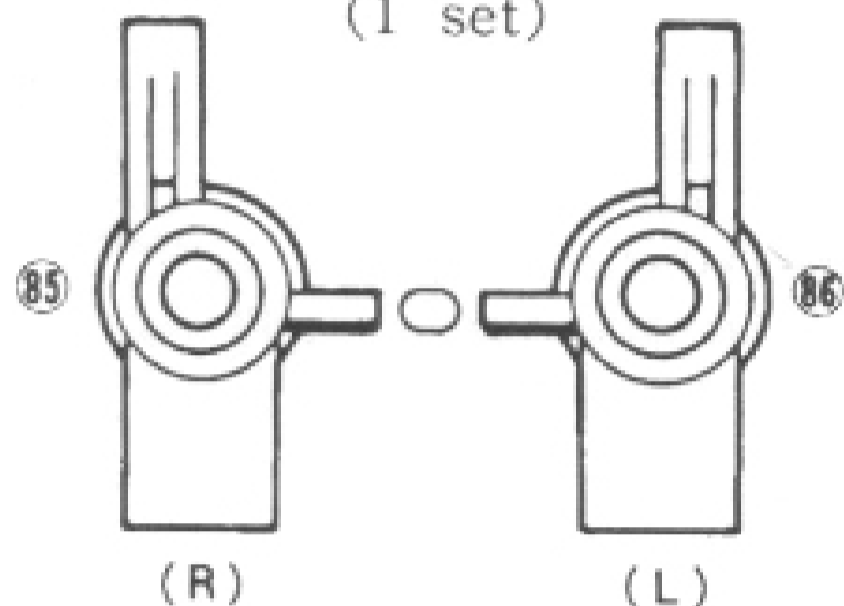
Front Hub  
(1 set)



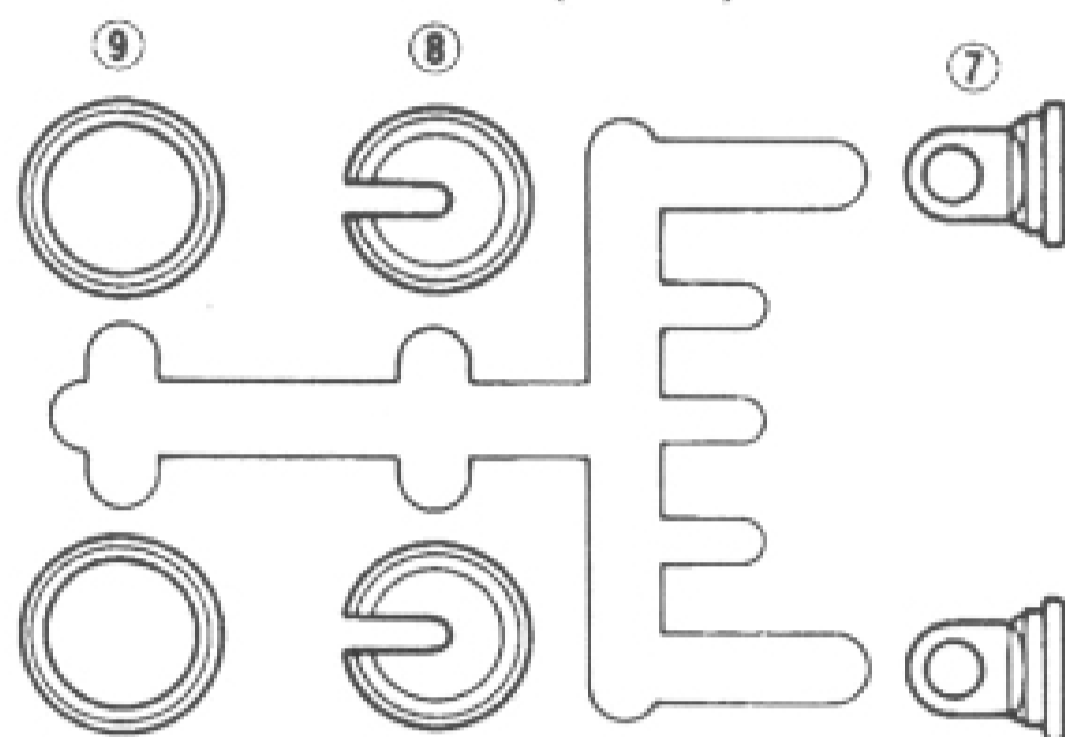
Knuckle Arm  
(1 set)



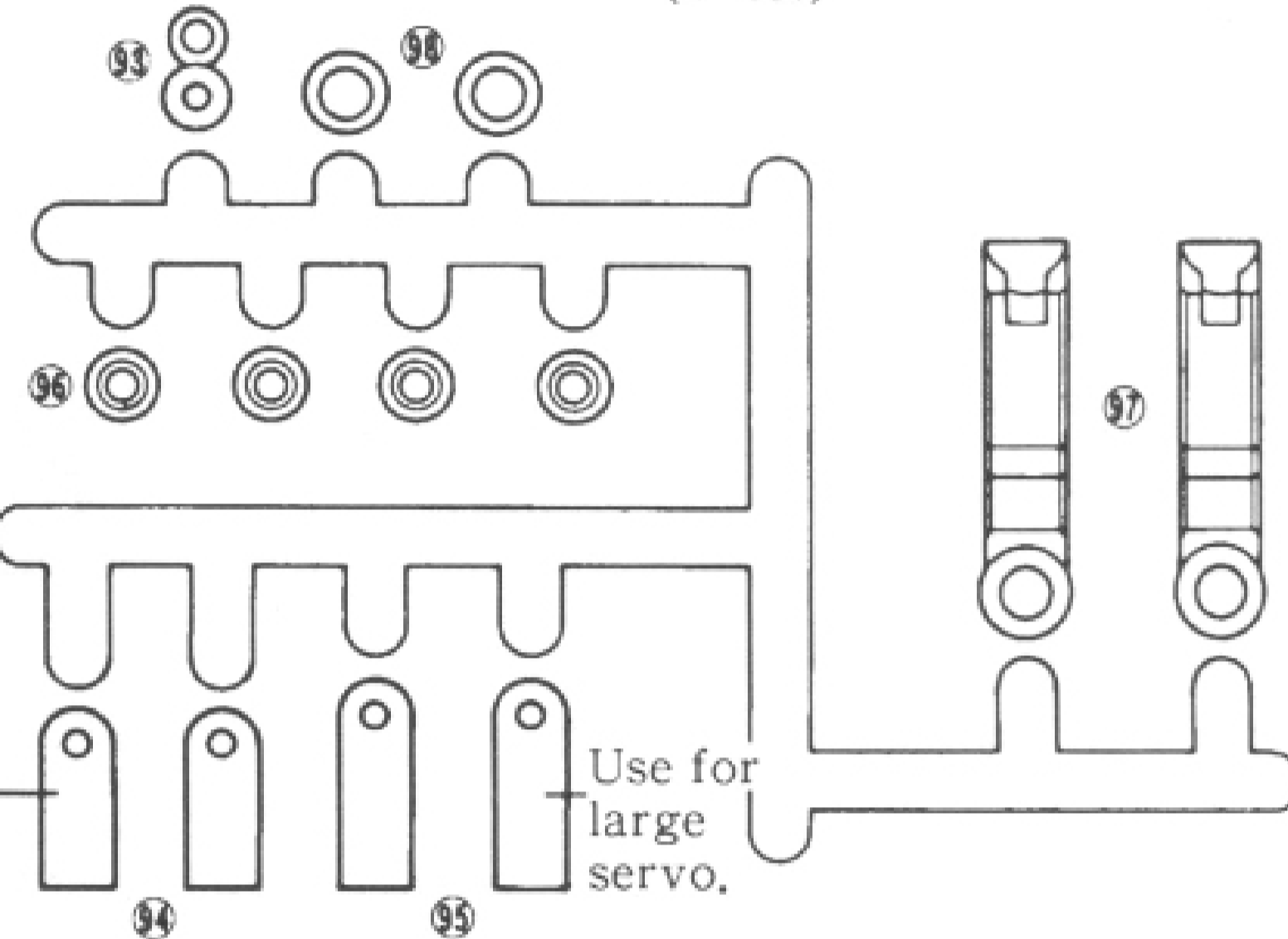
Rear Hub  
(1 set)



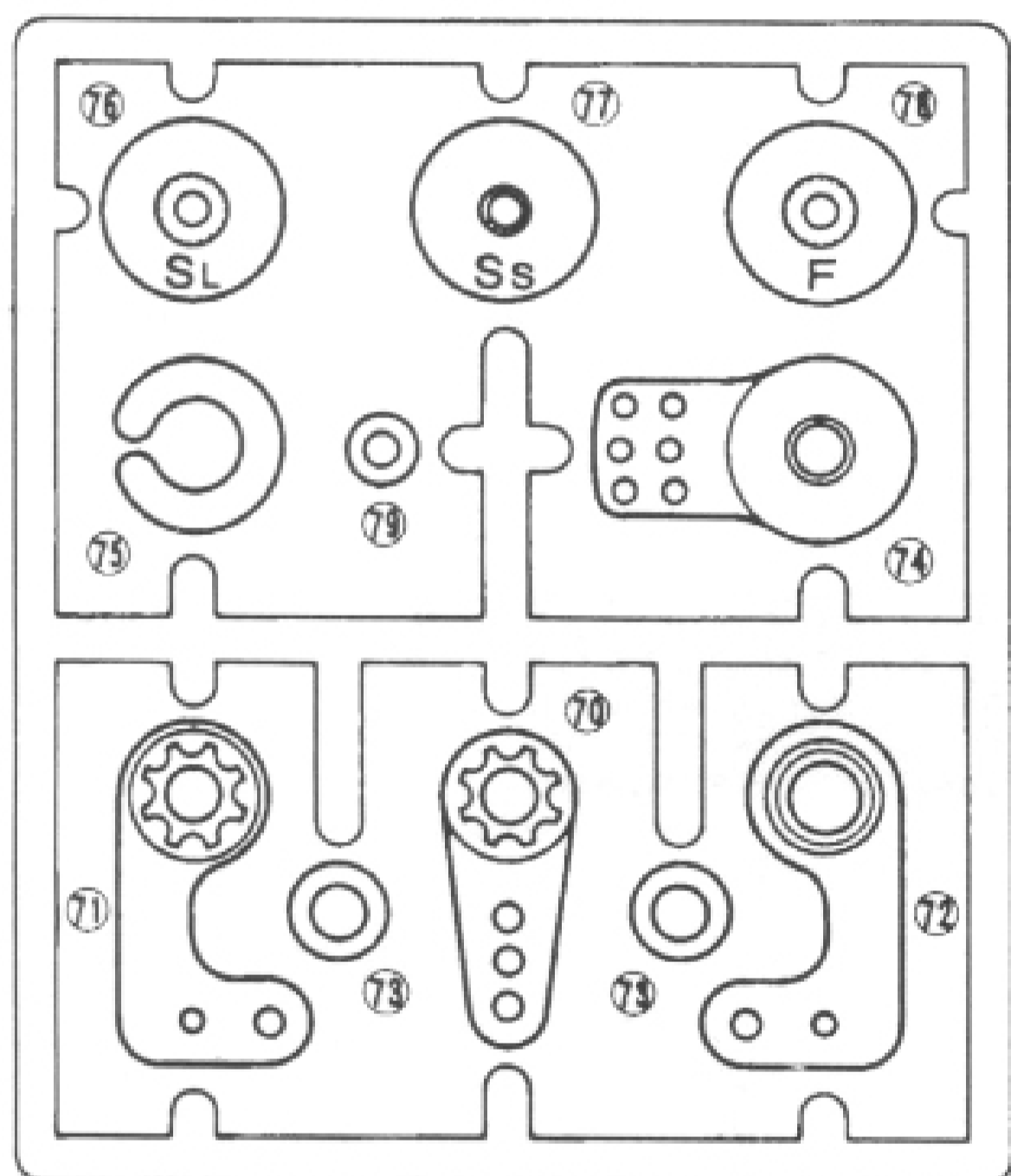
Shock Parts  
(4 set)



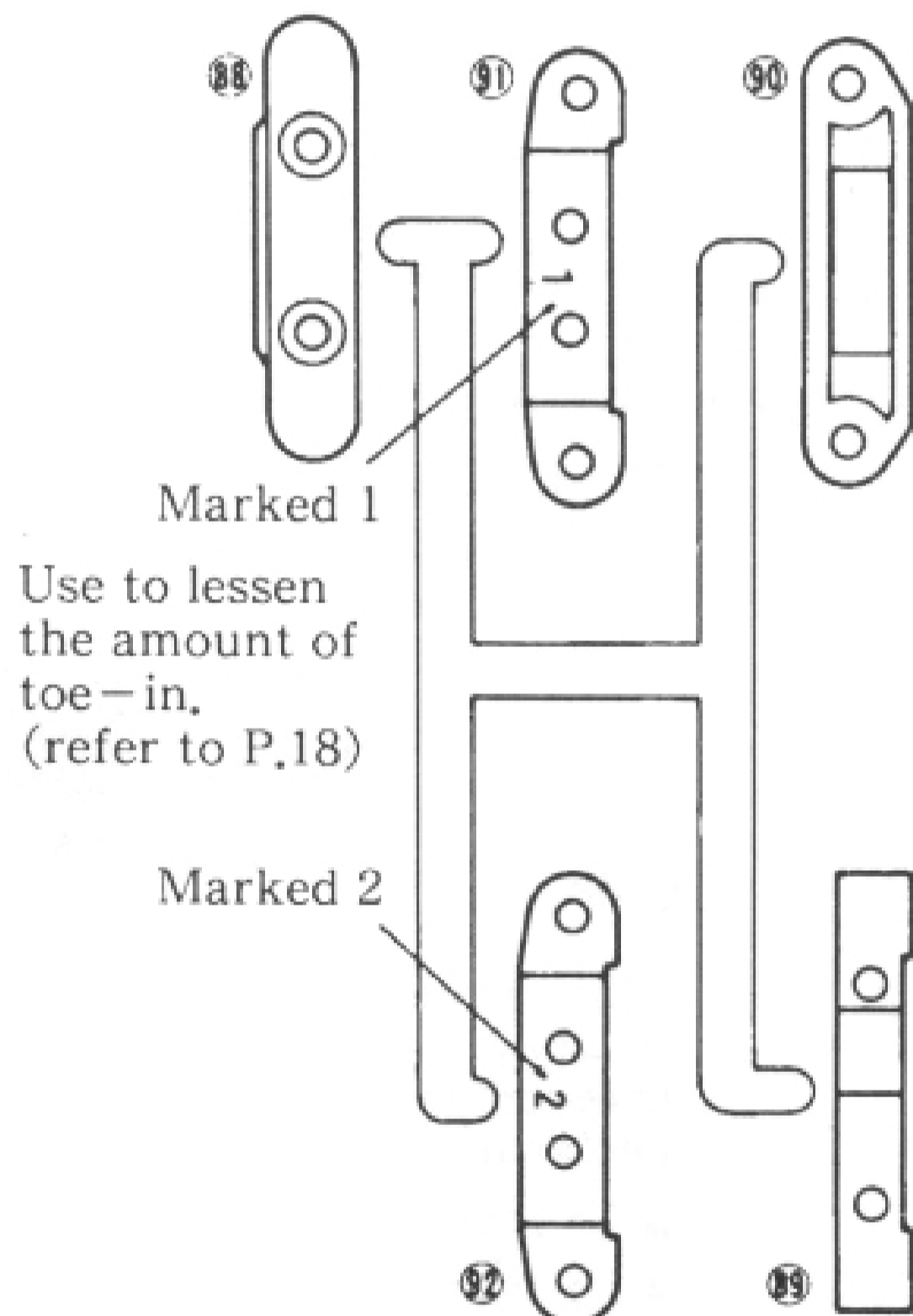
Upper Rod End Parts  
(1 set)



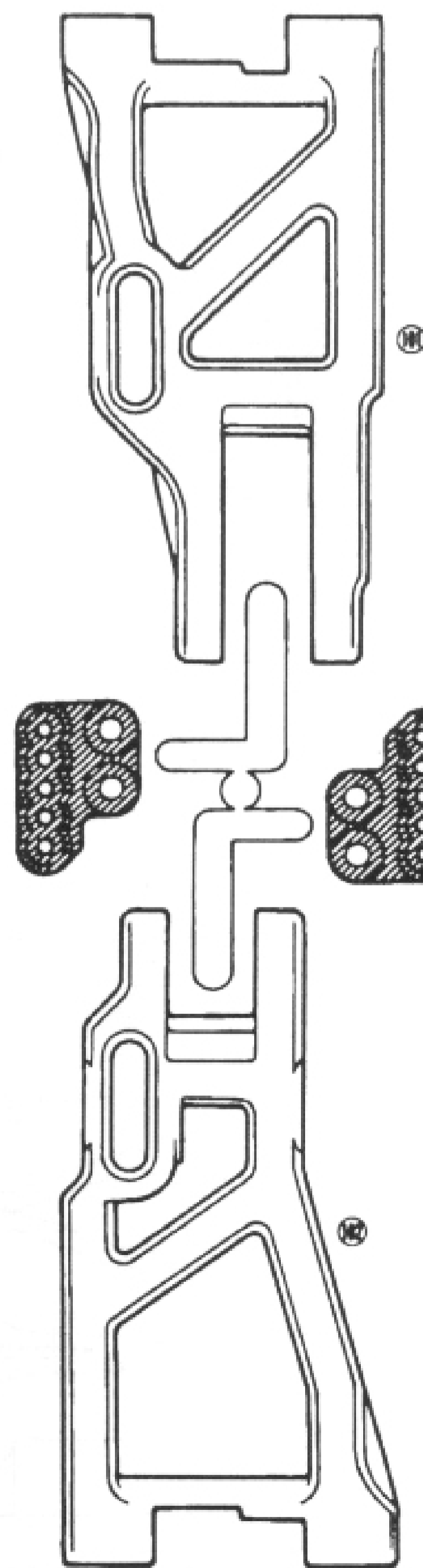
Servo Saver & Uni Crank Parts  
(1 set)



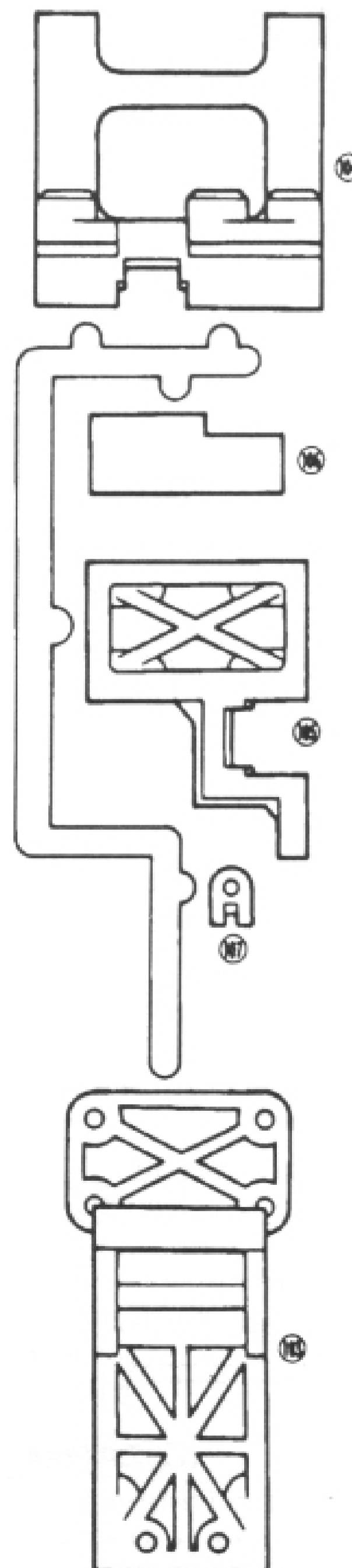
Arm Bracket Parts  
(1 set)



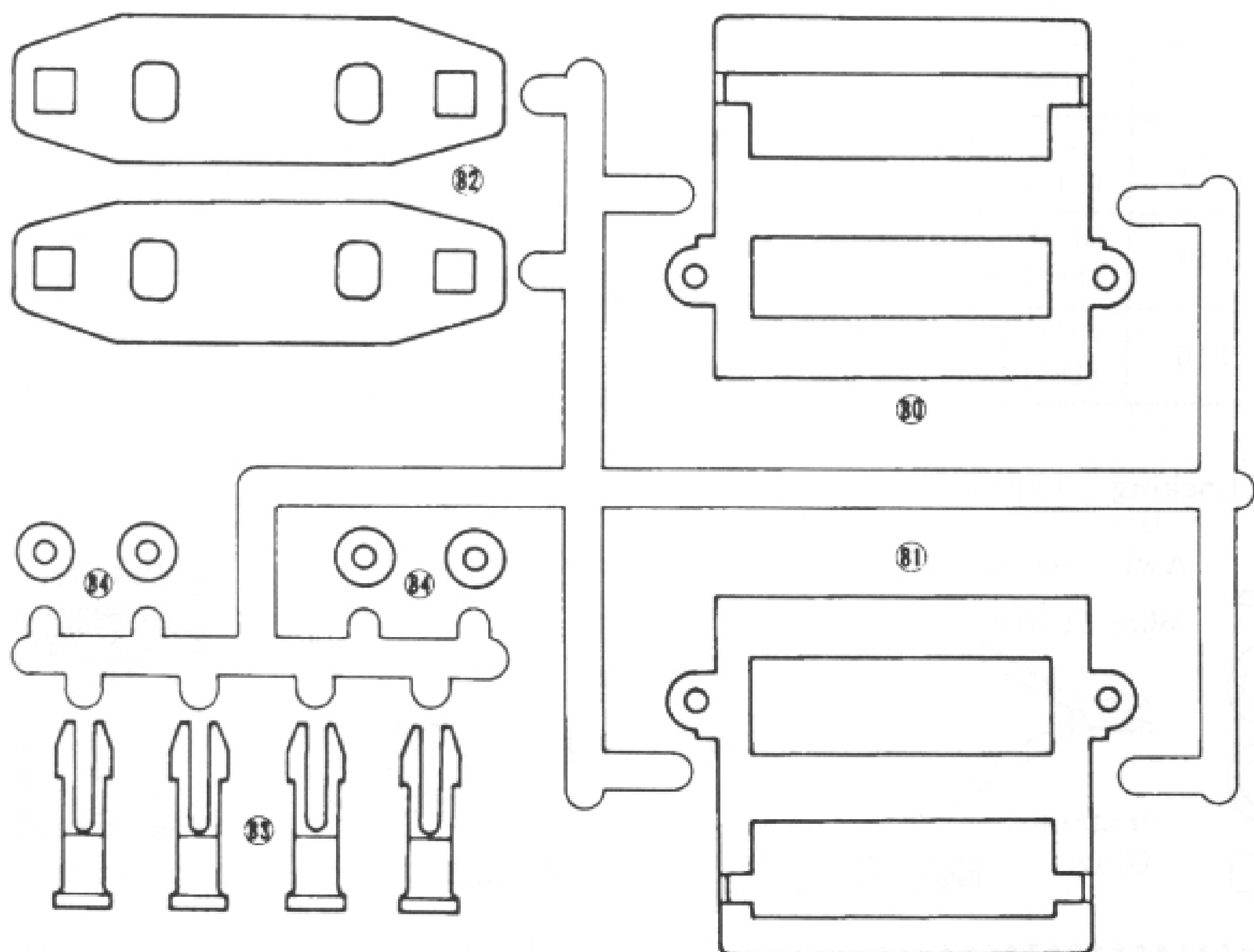
Sus. Arm Parts  
(2 set)



Upper Deck Mount  
Parts (1 set)



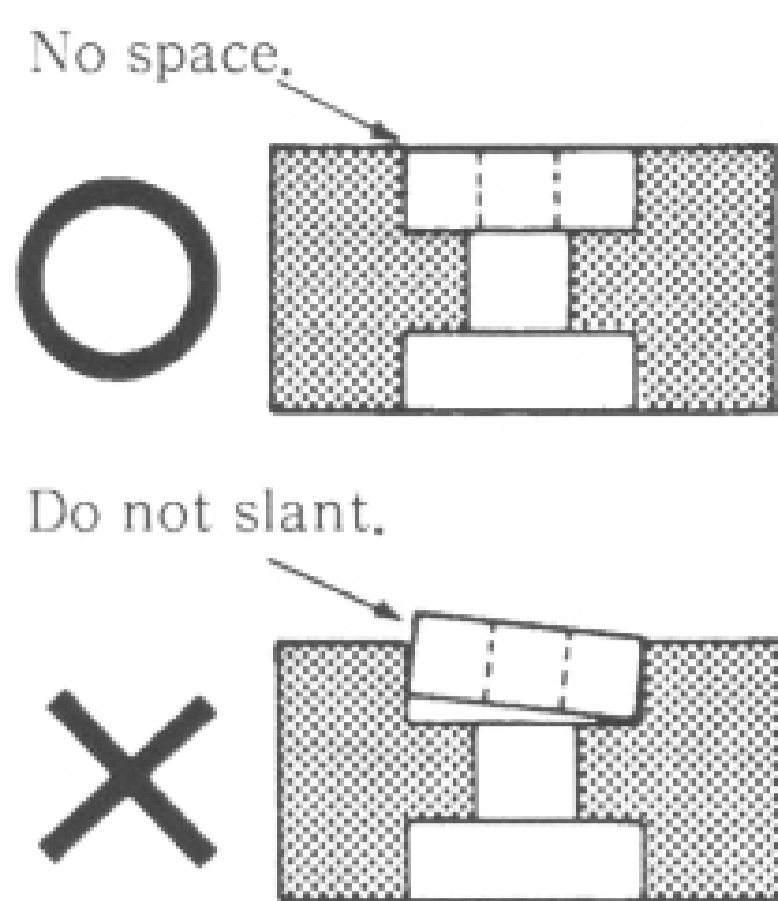
Battery Stopper Parts  
(1 set)



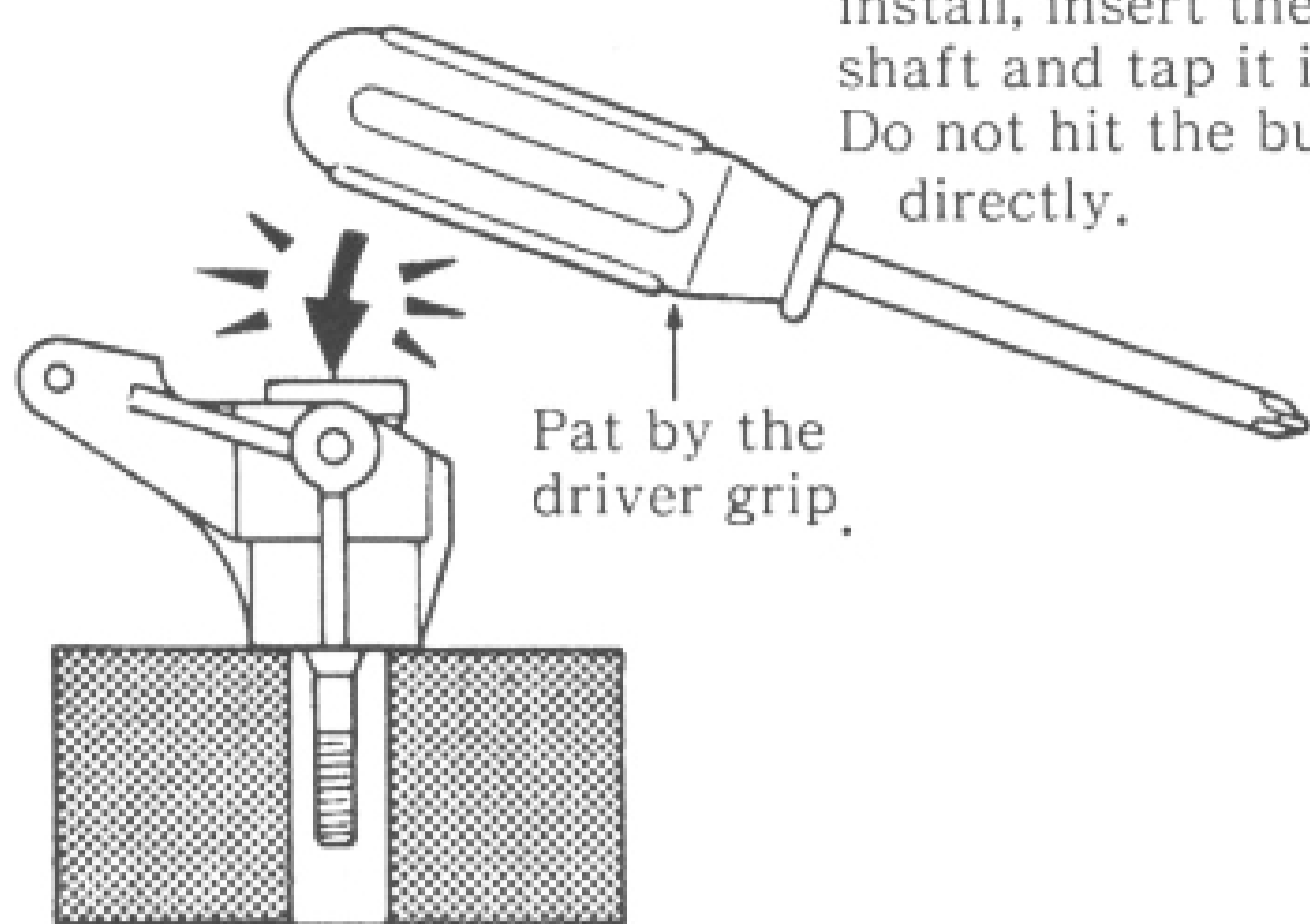


# WHEN INSTALL BUSHING...

(1) Push in till the end.

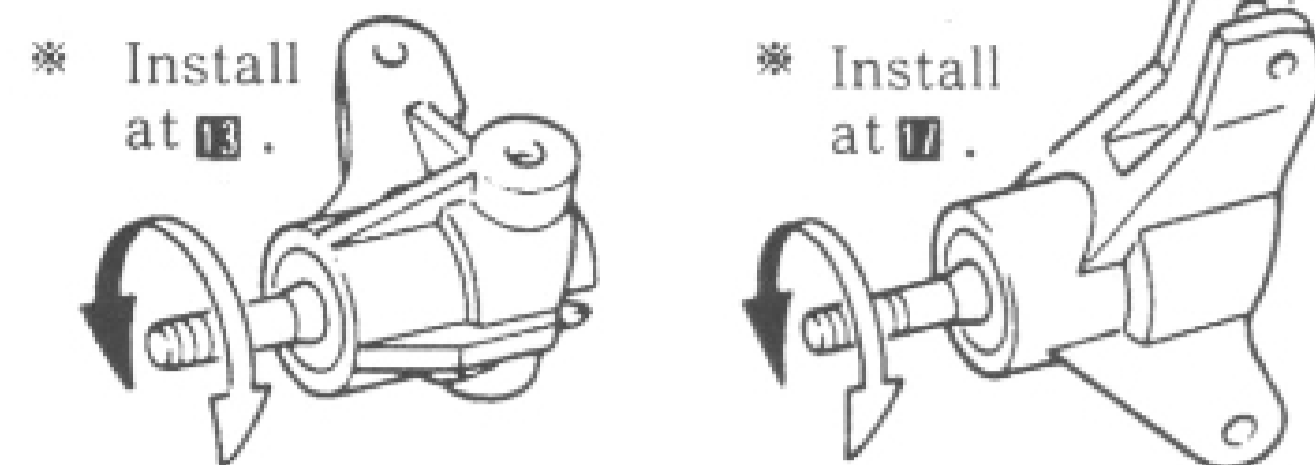


\* If very tight and hard to install, insert the wheel shaft and tap it in. Do not hit the bushing directly.



(2) After install the bushing...

Always check if it turns lightly after inserting the shaft. If it does not turn lightly, the bushing isn't fitted properly. Recheck (1) again.



(3) Don't forget apply the grease!

\* Apply a proper quantity.

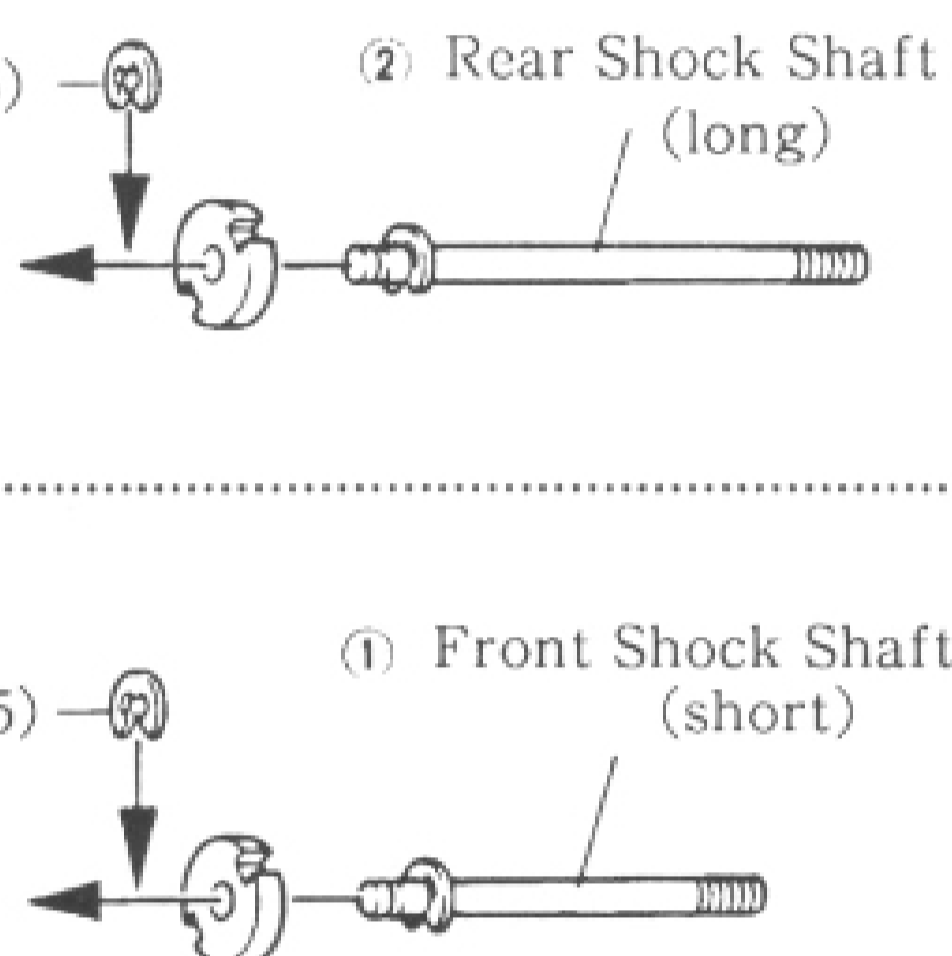
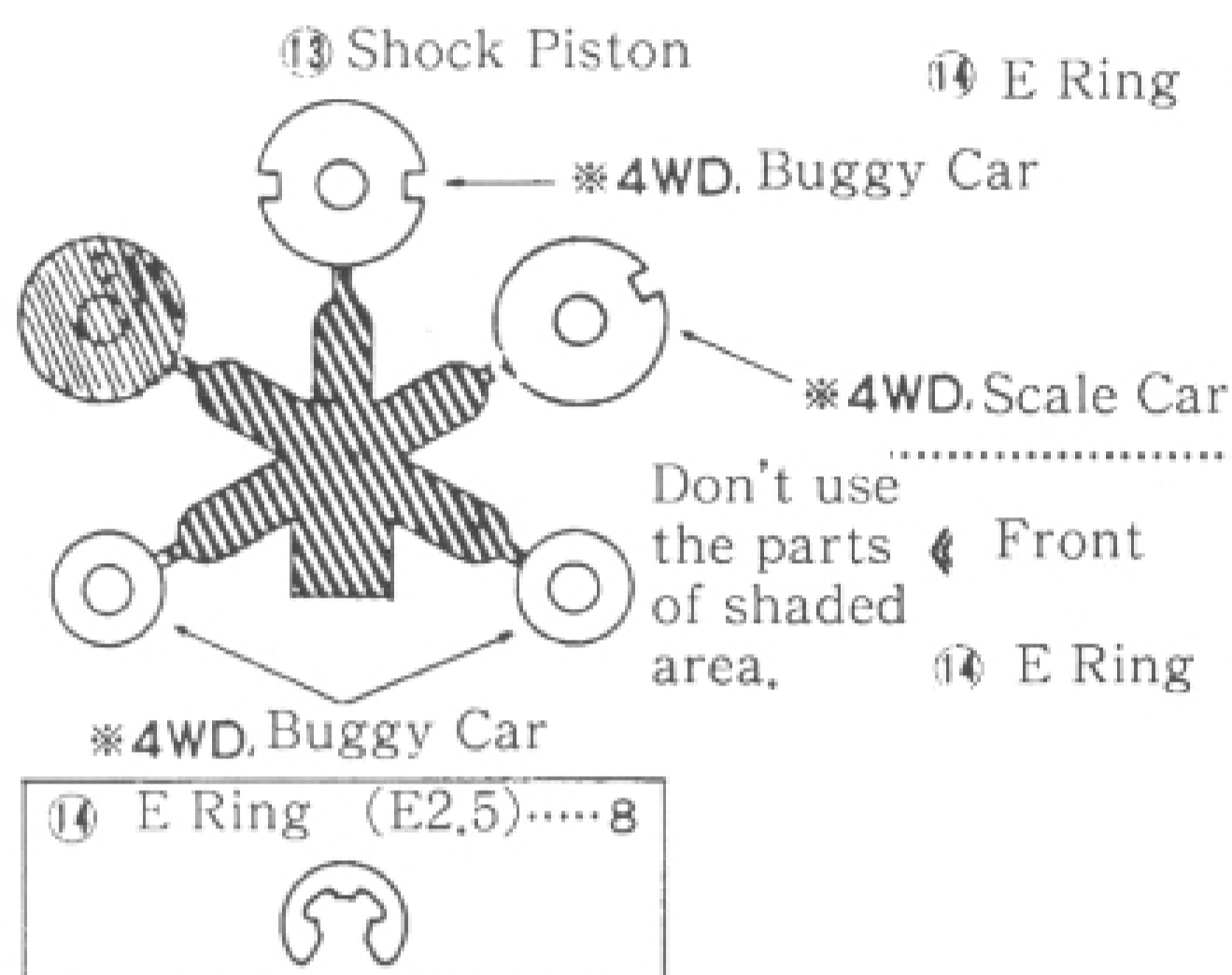
## ● ASSEMBLY OF CHASSIS PORTION 1 ~ 31

### 1 ASSEMBLY OF OIL SHOCK \* These parts are in (bagged1).

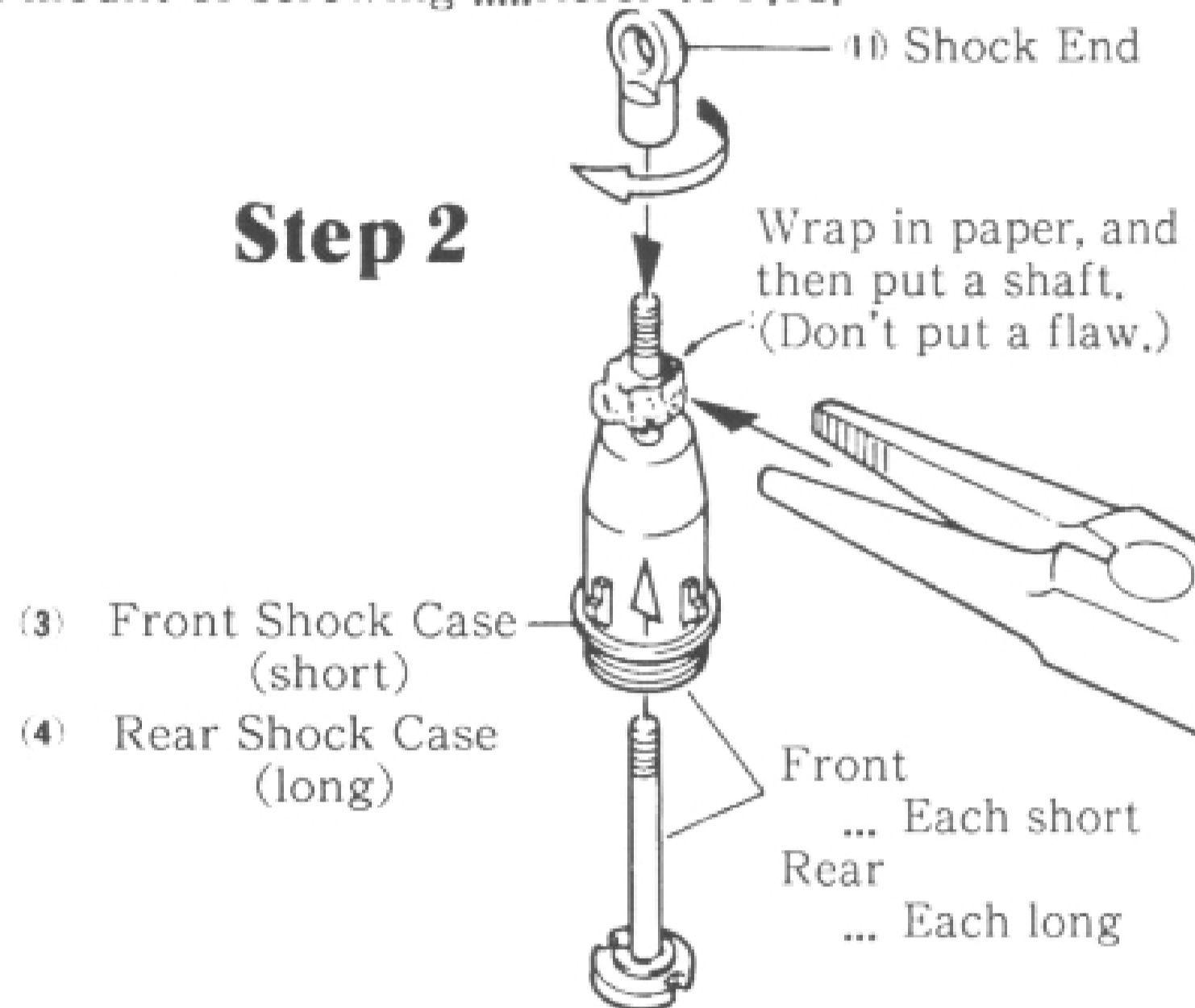
A mount of screwing .....Refer to P.18.

**Step 1** Assemble each two pieces, (for front, for rear)

« Rear »



**Step 2**

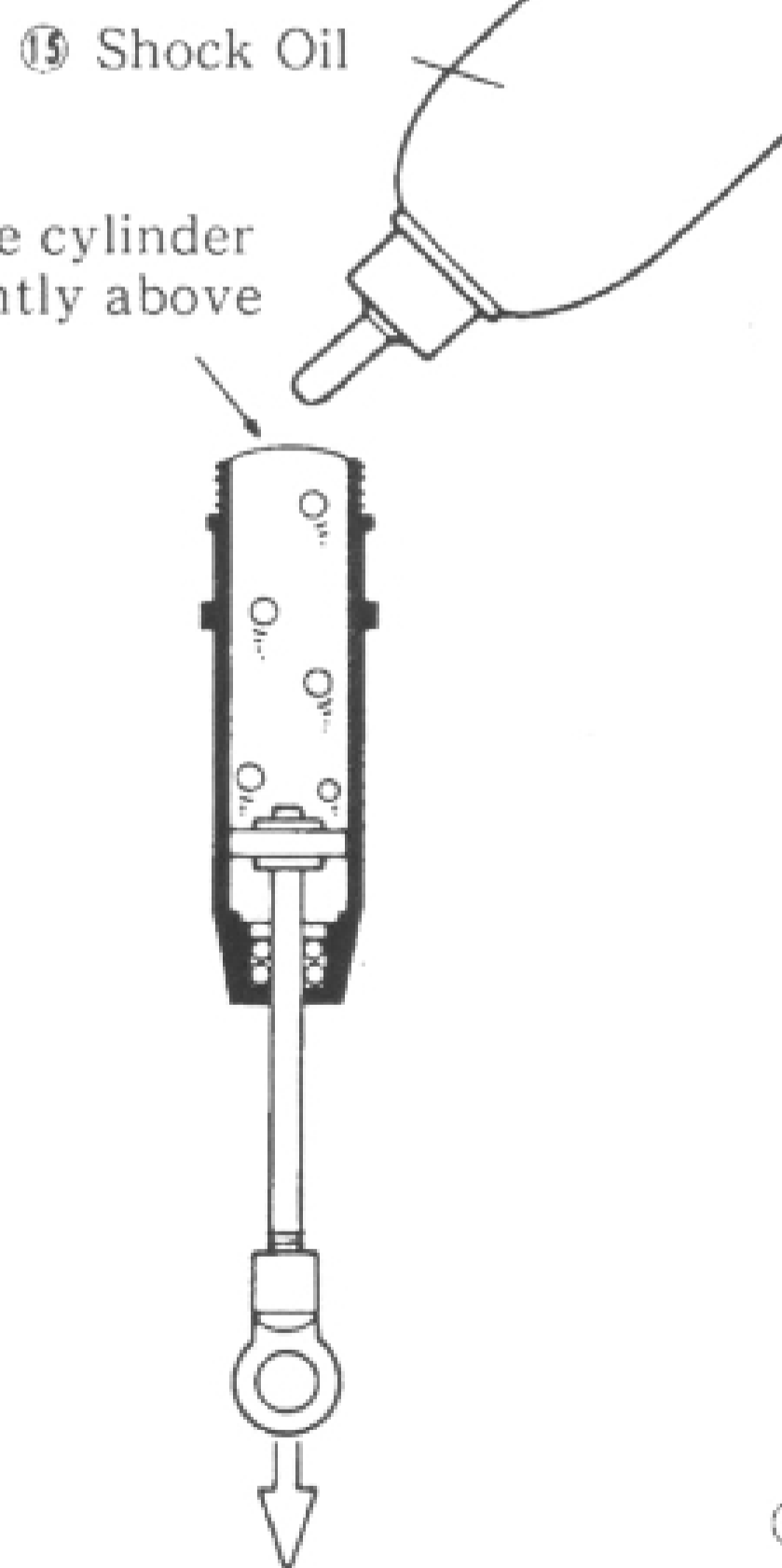


### 2 FILLING SHOCK OIL

\* These parts are in (bagged1) (except φ 5.8 Ball)

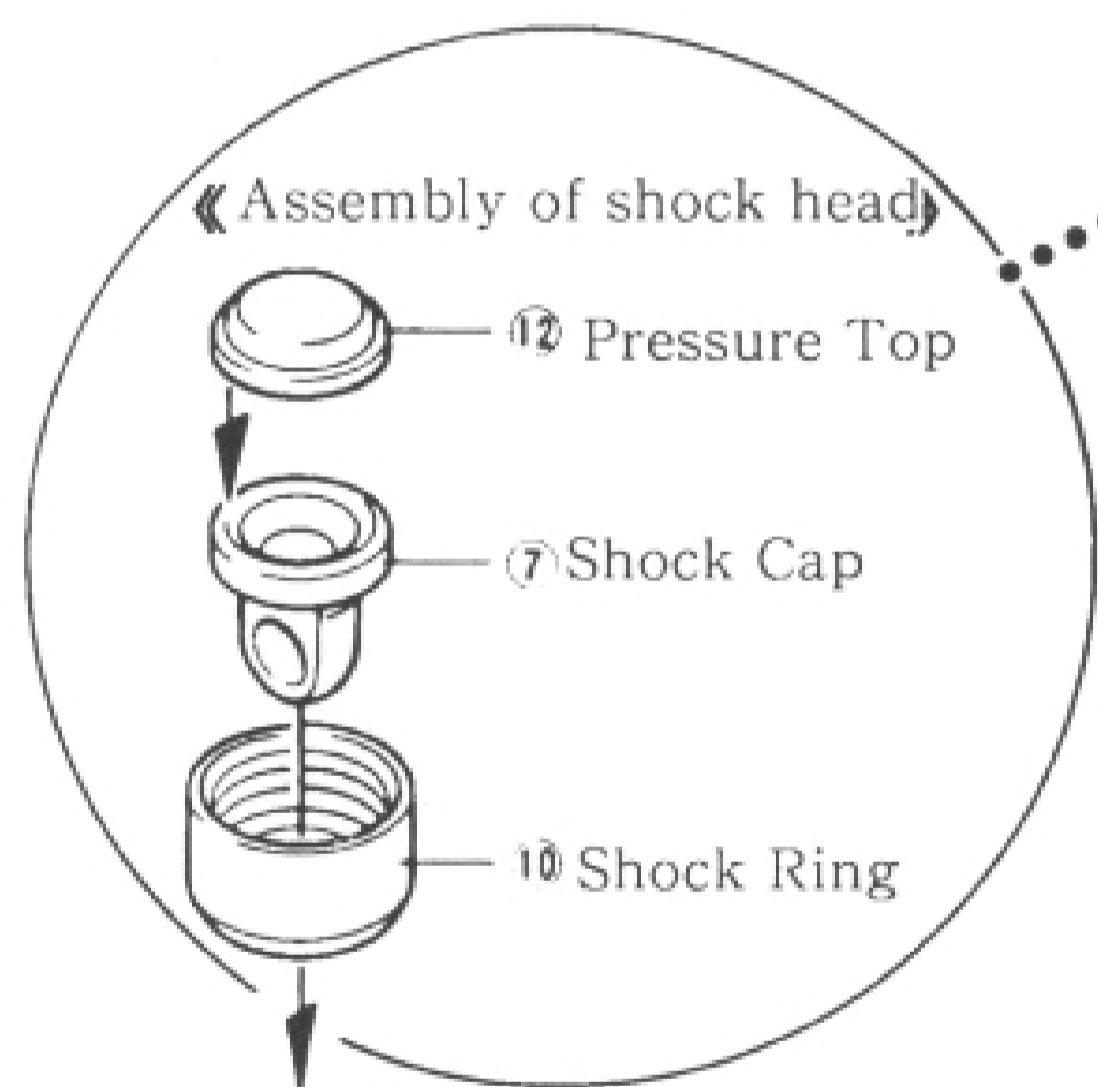
**Step 1**

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.



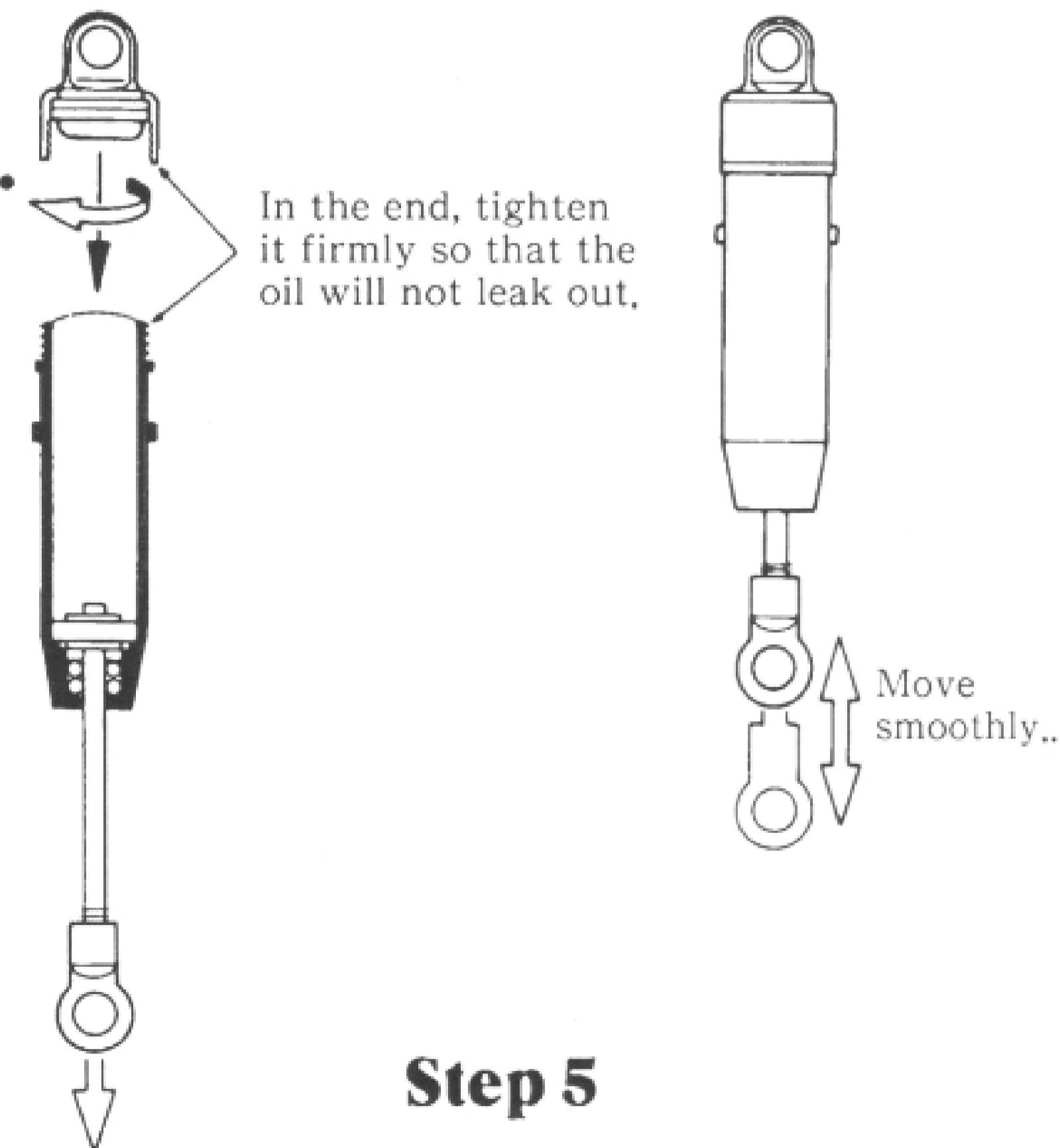
**Step 2**

Keep the piston in the lowest position and tighten the head portion gradually, then excessive oil will run over.



**Step 3**

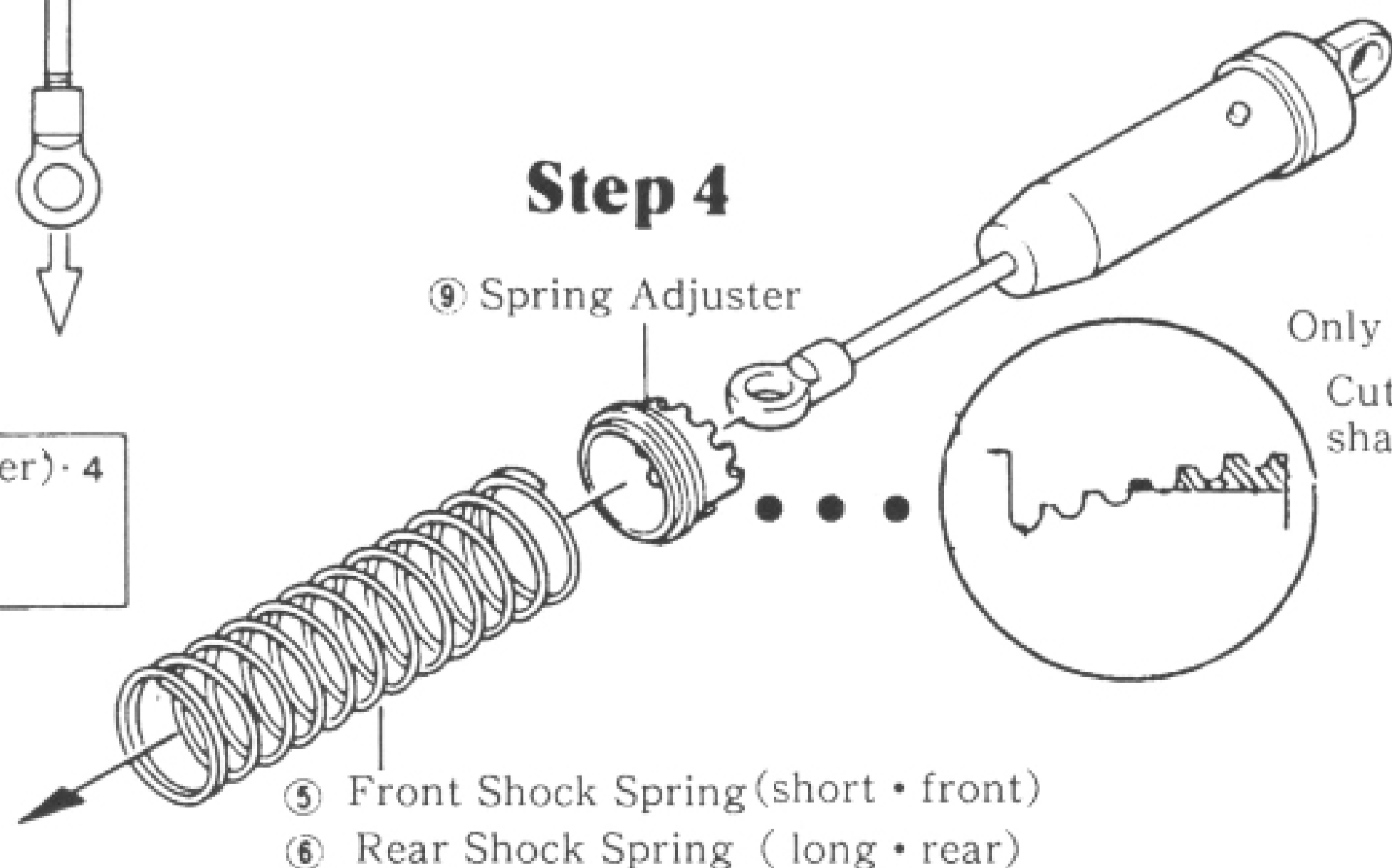
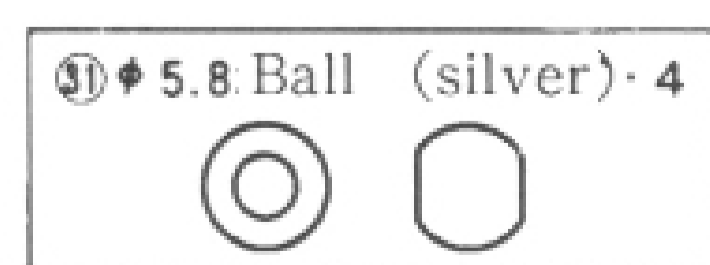
Confirm that it will work smoothly by moving the piston up and down.



**Step 4**

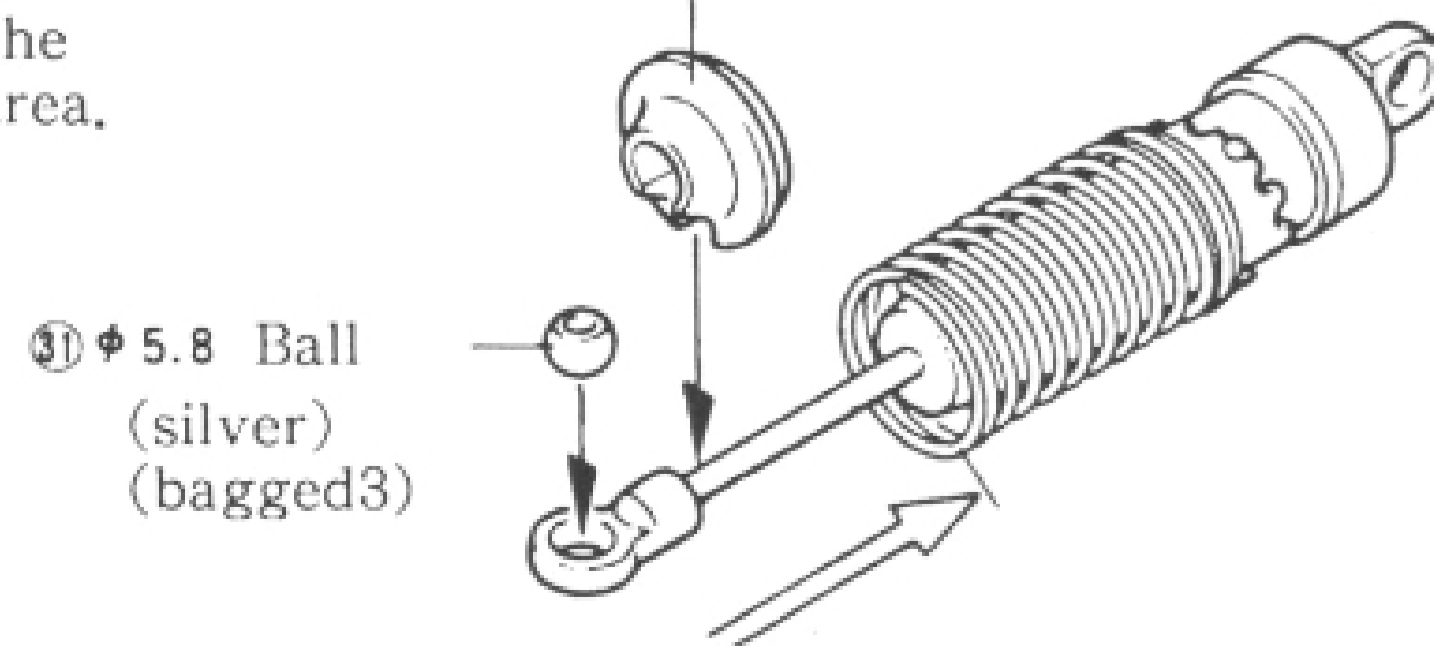
(9) Spring Adjuster

Only front... Cut off the shaded area.



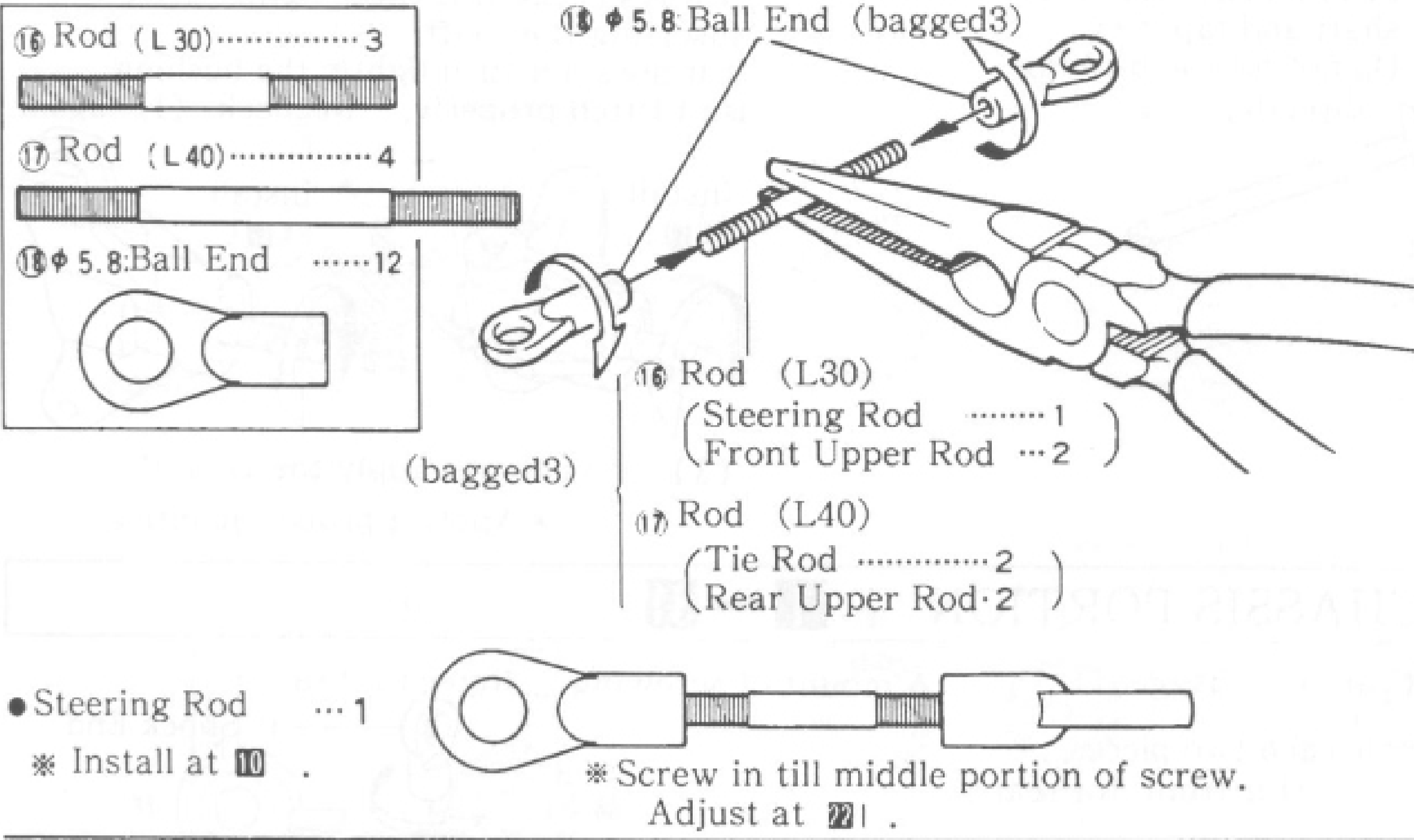
**Step 5**

(8) Spring Holder



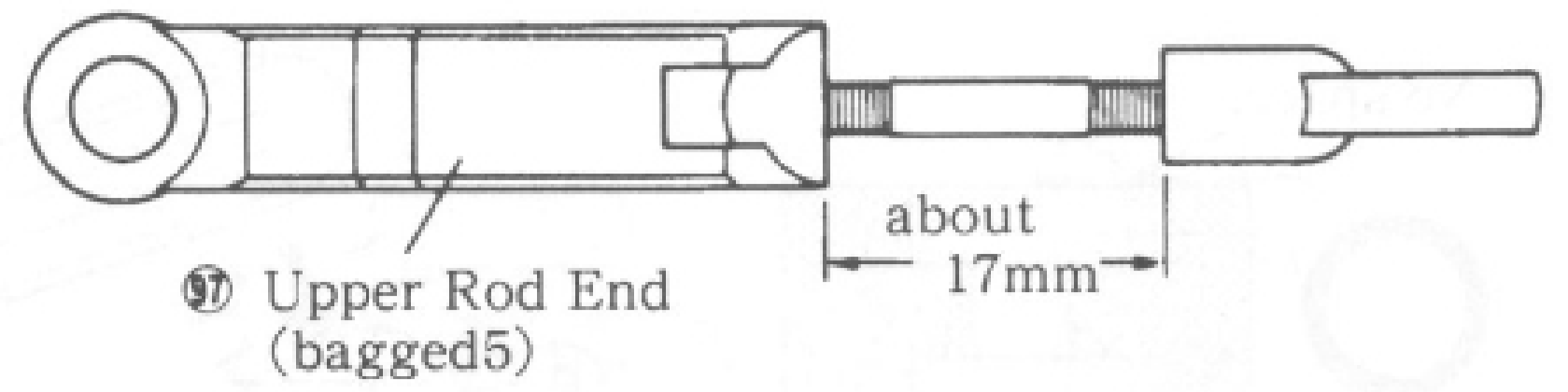
### 3 INSTALLATION OF BALL END

● Screw in the ball ends, put together the length with the actual size drawing.

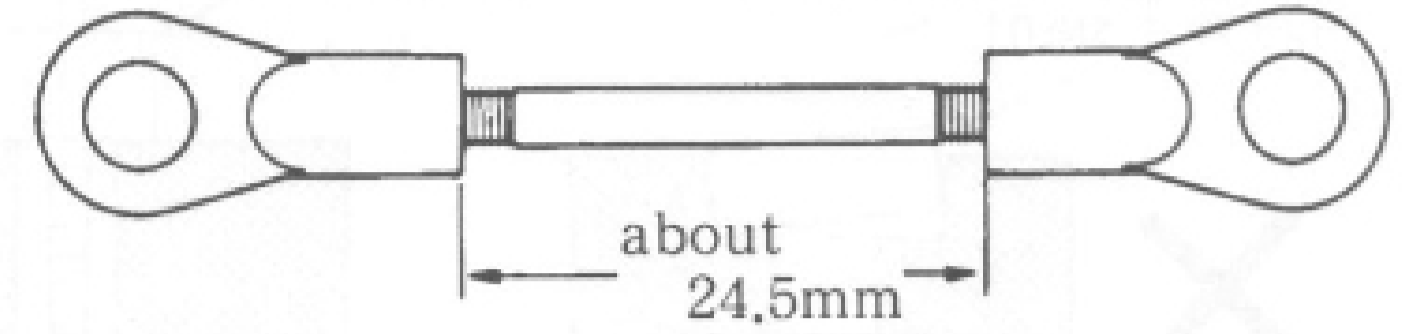


《 ACTUAL SIZE DRAWING 》

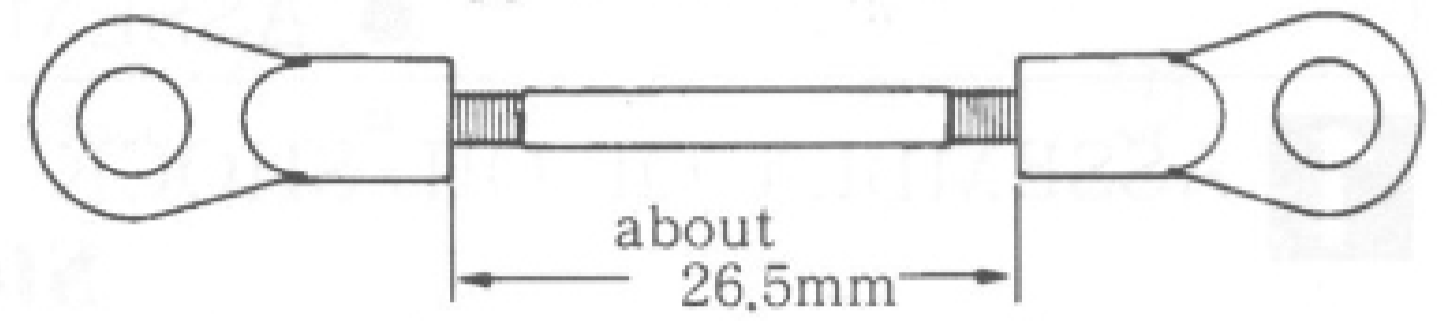
● Front Upper Rod ... 2 \* Install at 12 .



● Tie Rod \* Install at 10 .

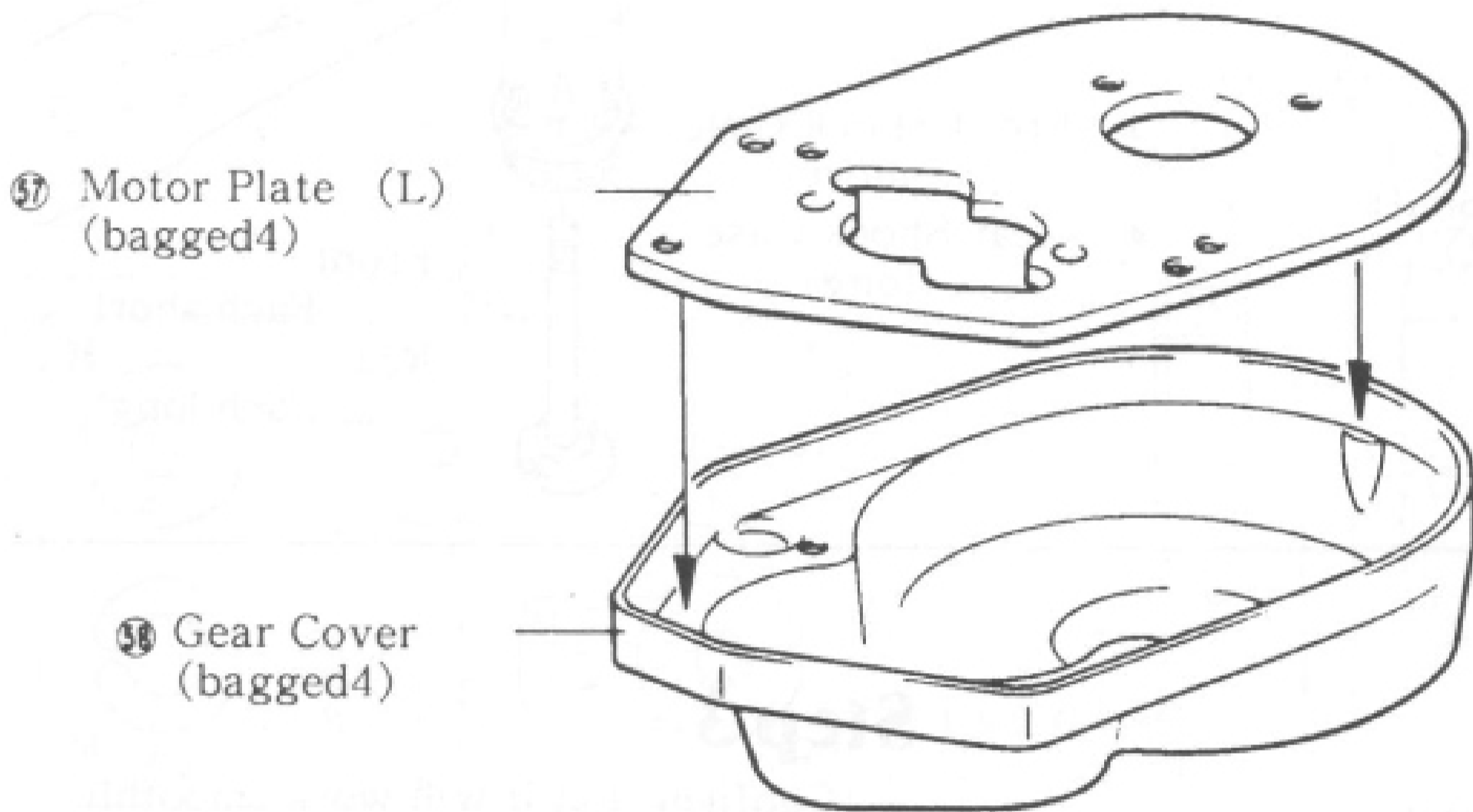


● Rear Upper Rod... 2 \* Install at 18 .



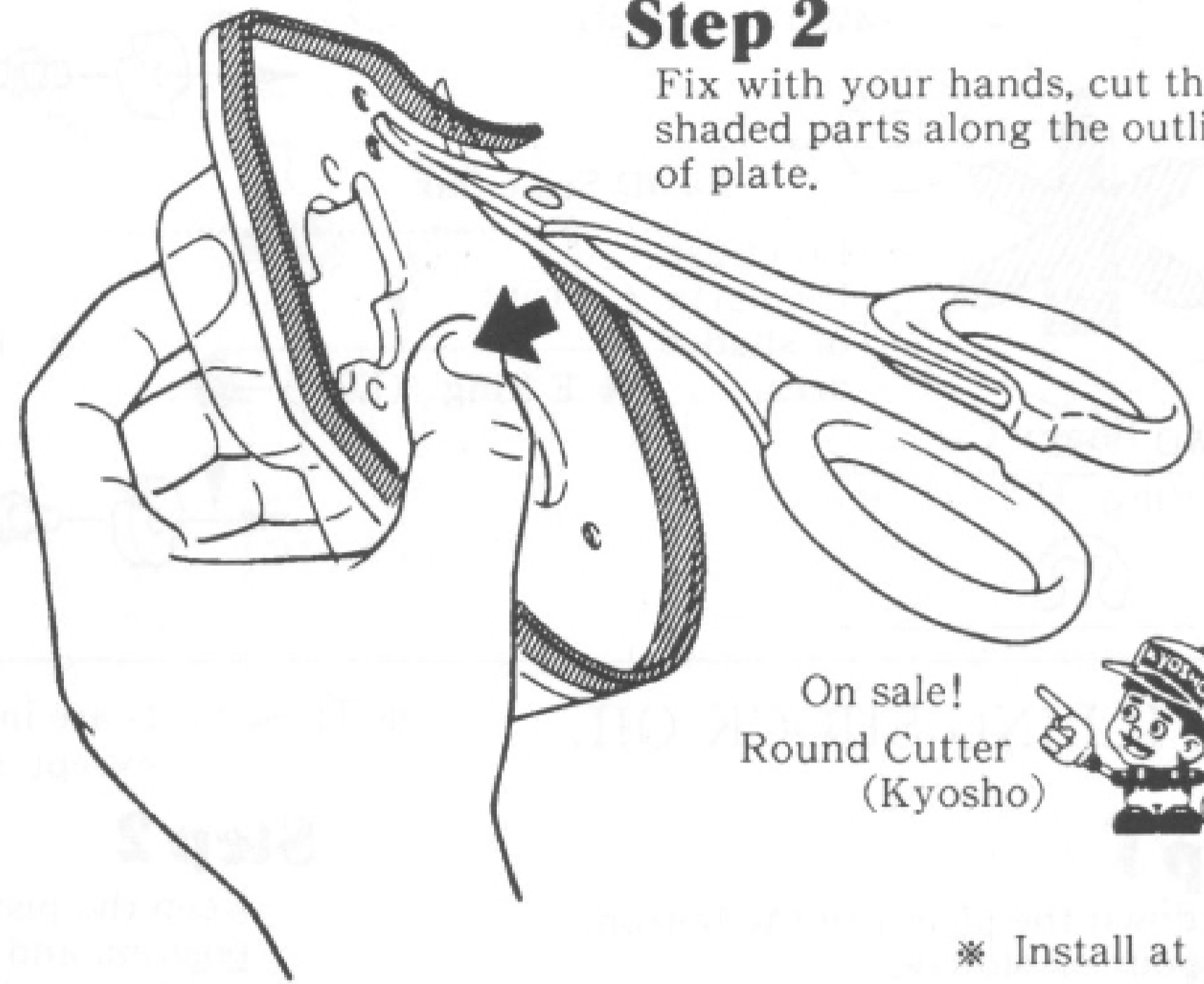
### 4 CUTTING OF GEAR COVER

#### Step 1



#### Step 2

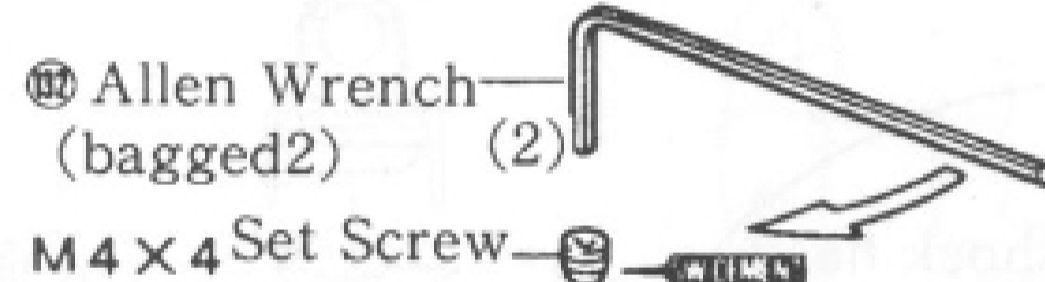
Fix with your hands, cut the shaded parts along the outline of plate.



On sale!  
Round Cutter  
(Kyosho)

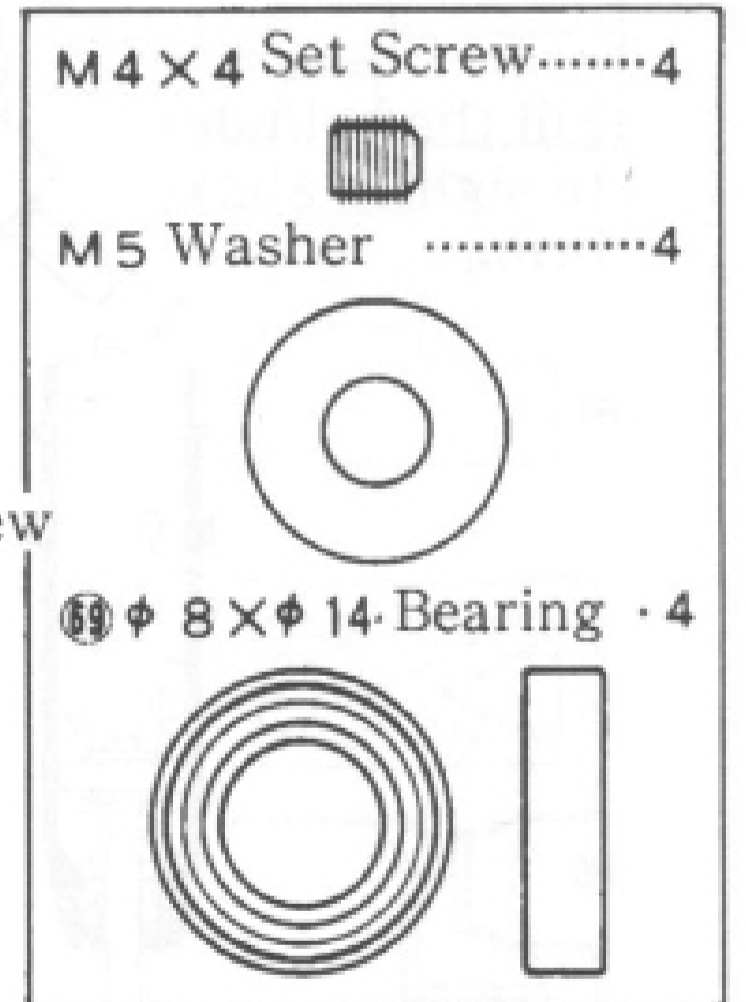
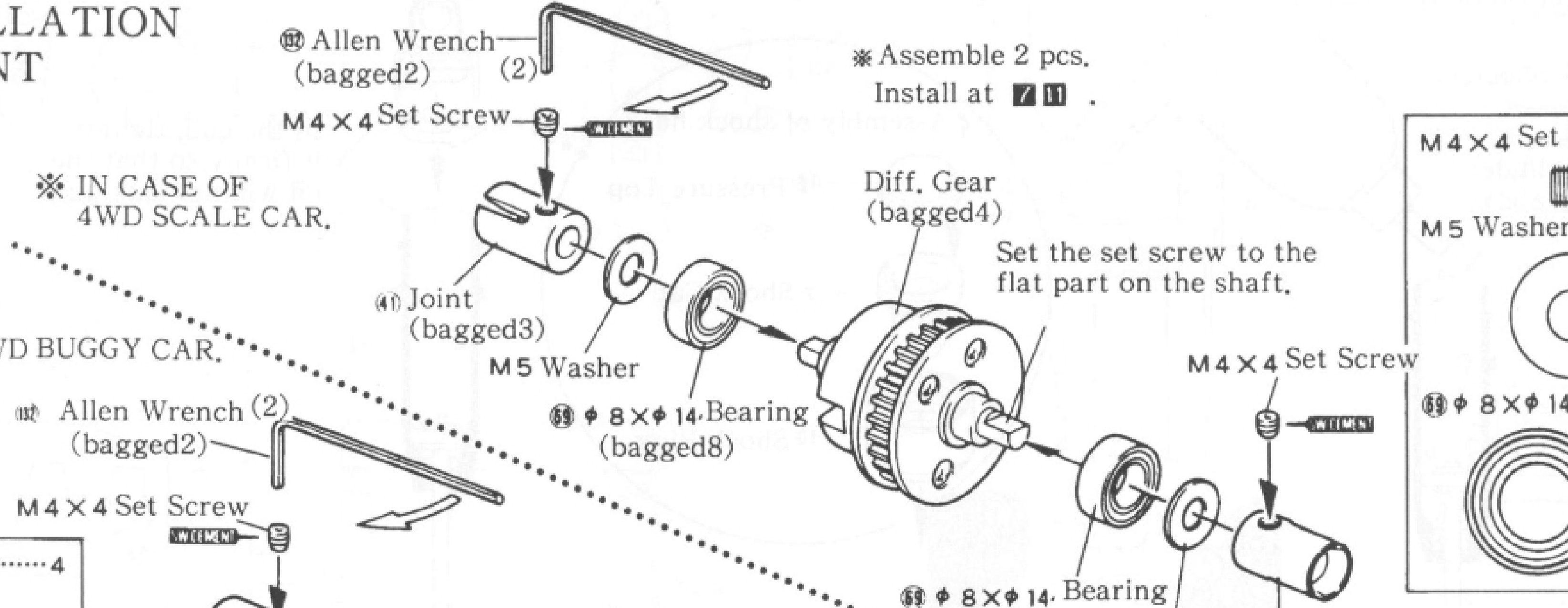
\* Install at 27 .

### 5 INSTALLATION OF JOINT

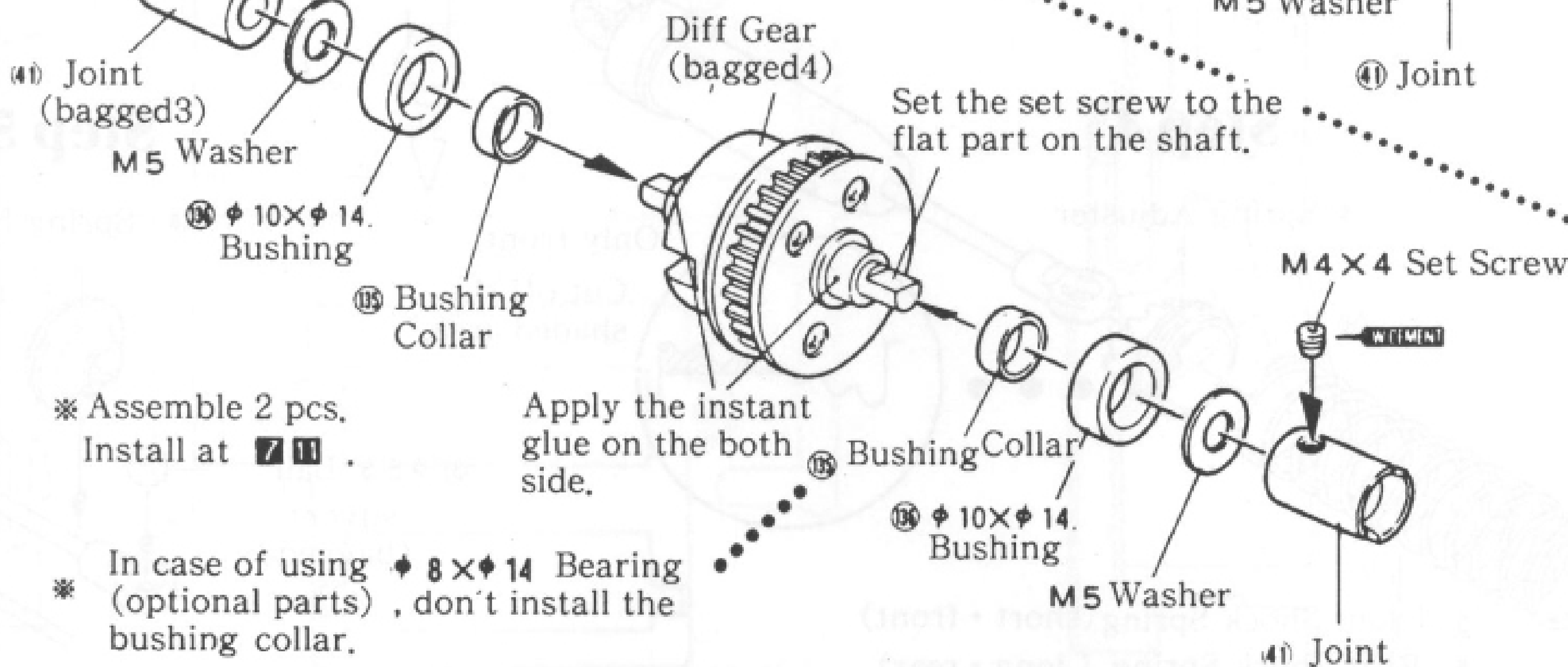
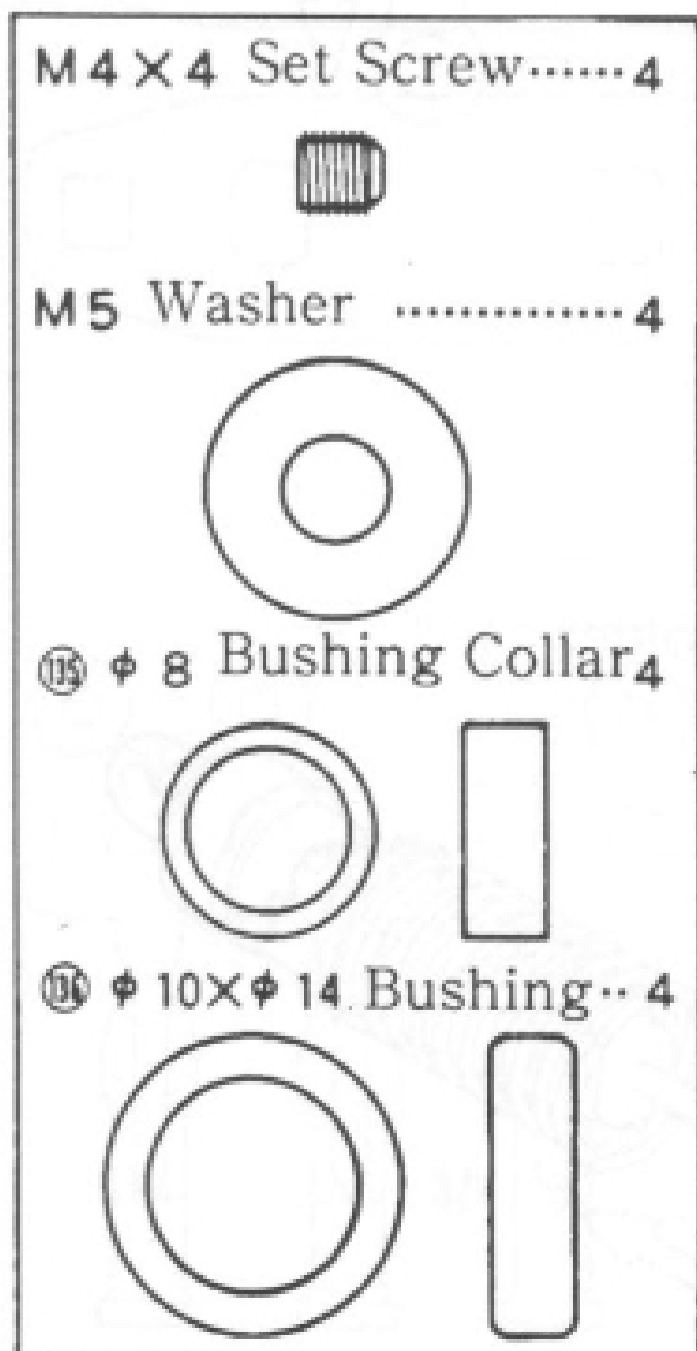


\* Assemble 2 pcs.  
Install at 21 .

\* IN CASE OF 4WD SCALE CAR.



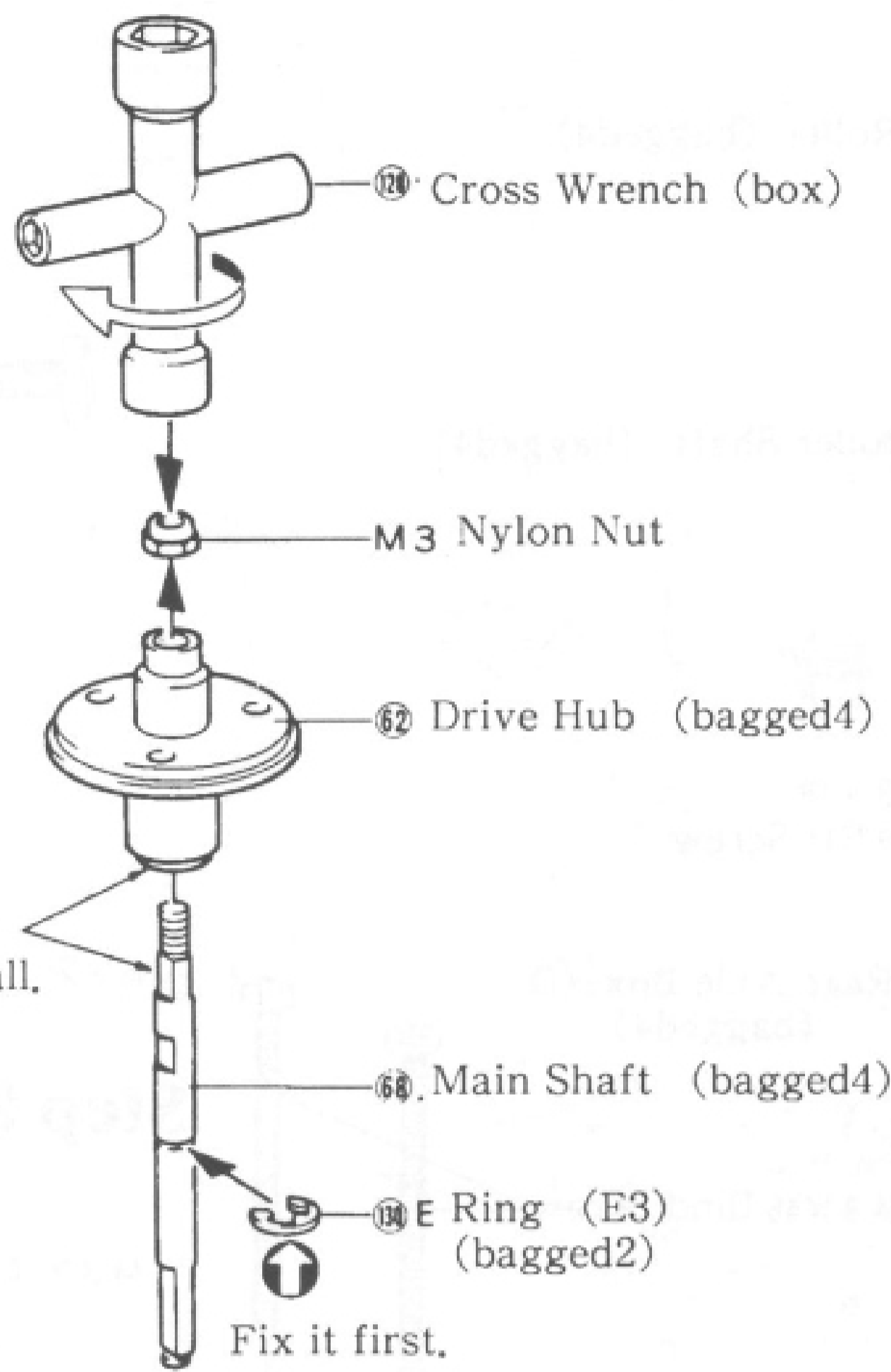
\* IN CASE OF 4WD BUGGY CAR.



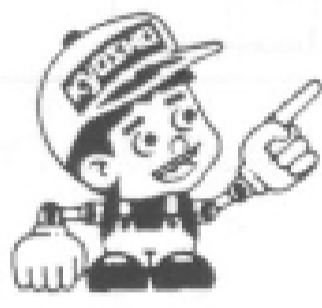
# 6 ASSEMBLY OF MAIN SHAFT

- M3 X 6 Bind Screw ..... 3
- M3 Nylon Nut ..... 1
- E Ring (E3) ..... 1

## Step 1

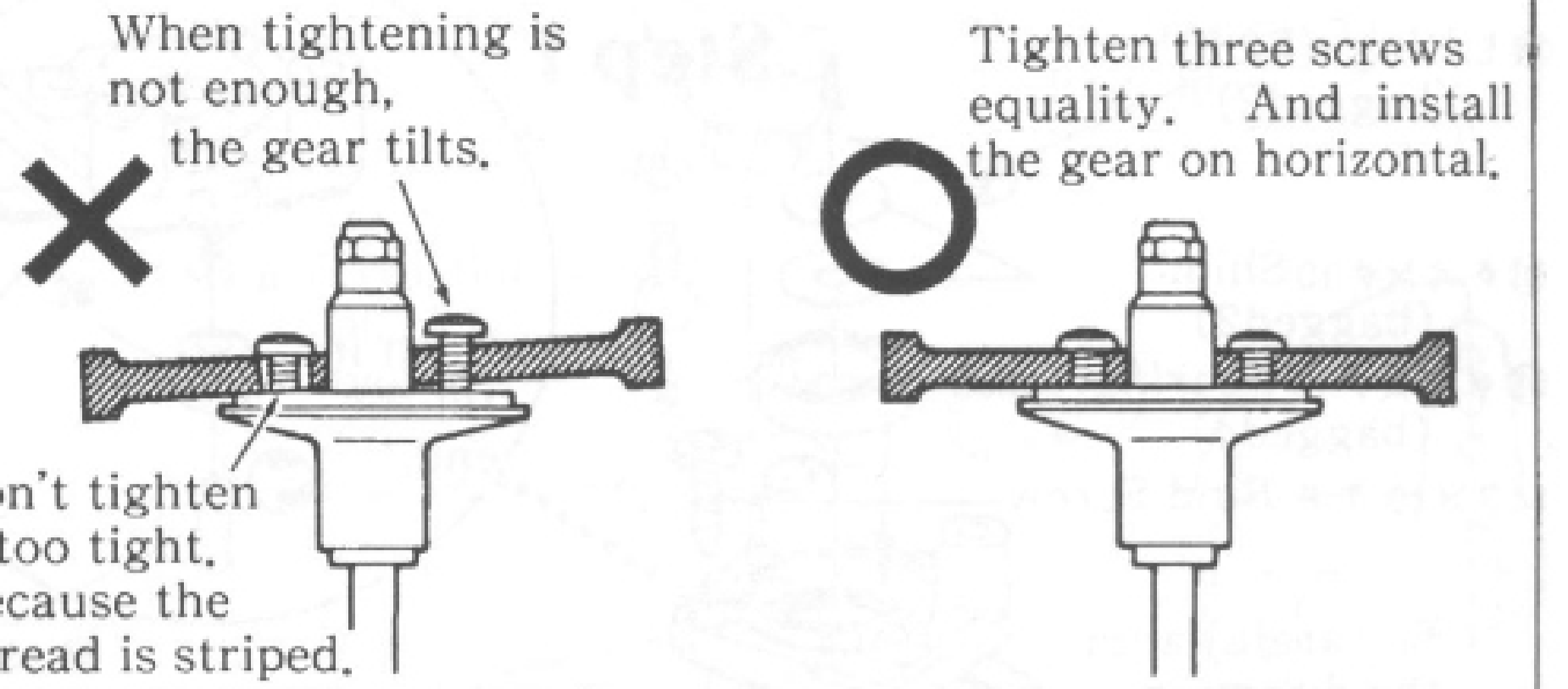


Fit to the flat part, and install.



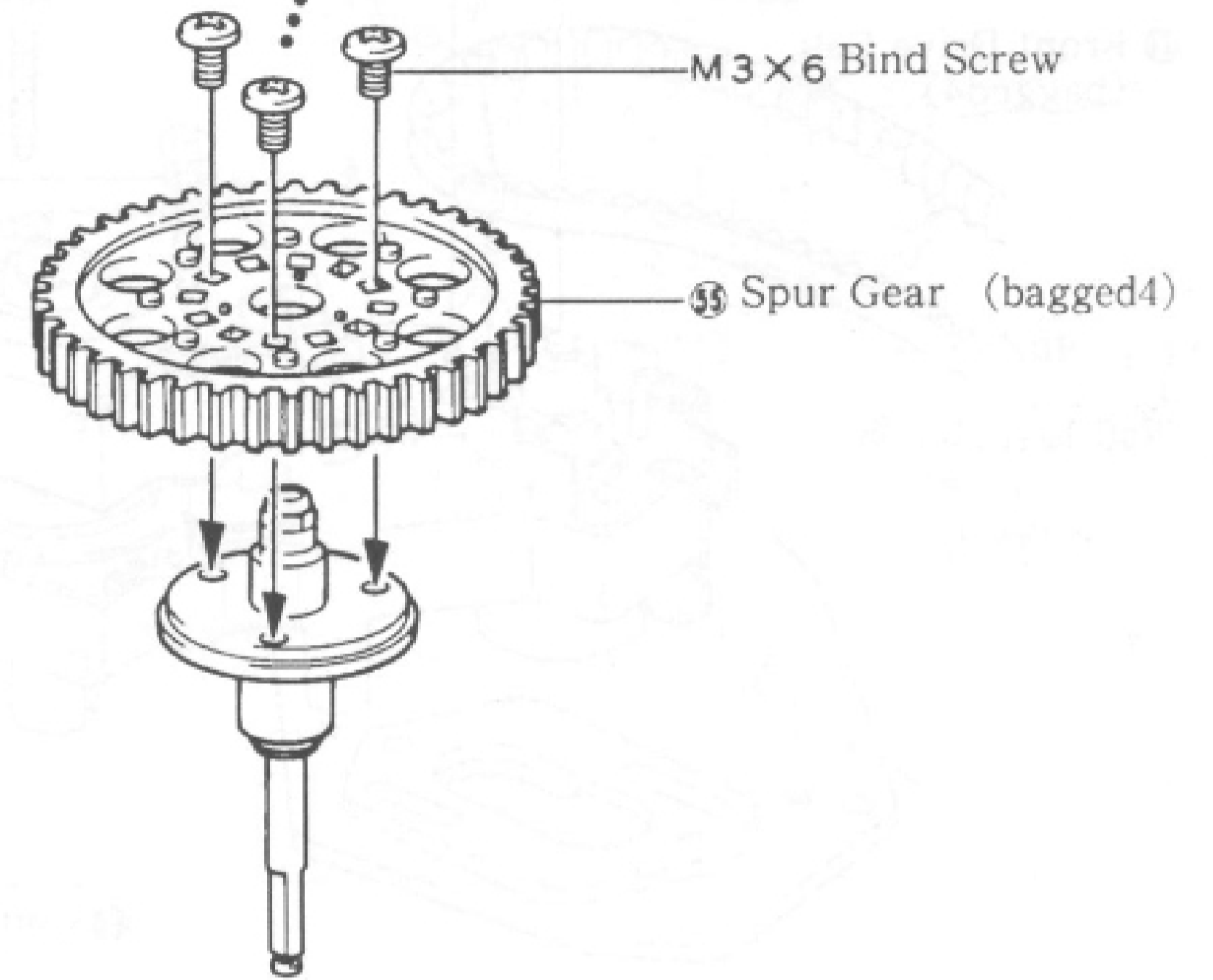
Fix it first.

Do not use excessive force when tightening the screw, or you may strip the thread. It is recommended to stop tightening it when you feel some resistance from tightening.



Don't tighten it too tight. Because the thread is striped.

## Step 2

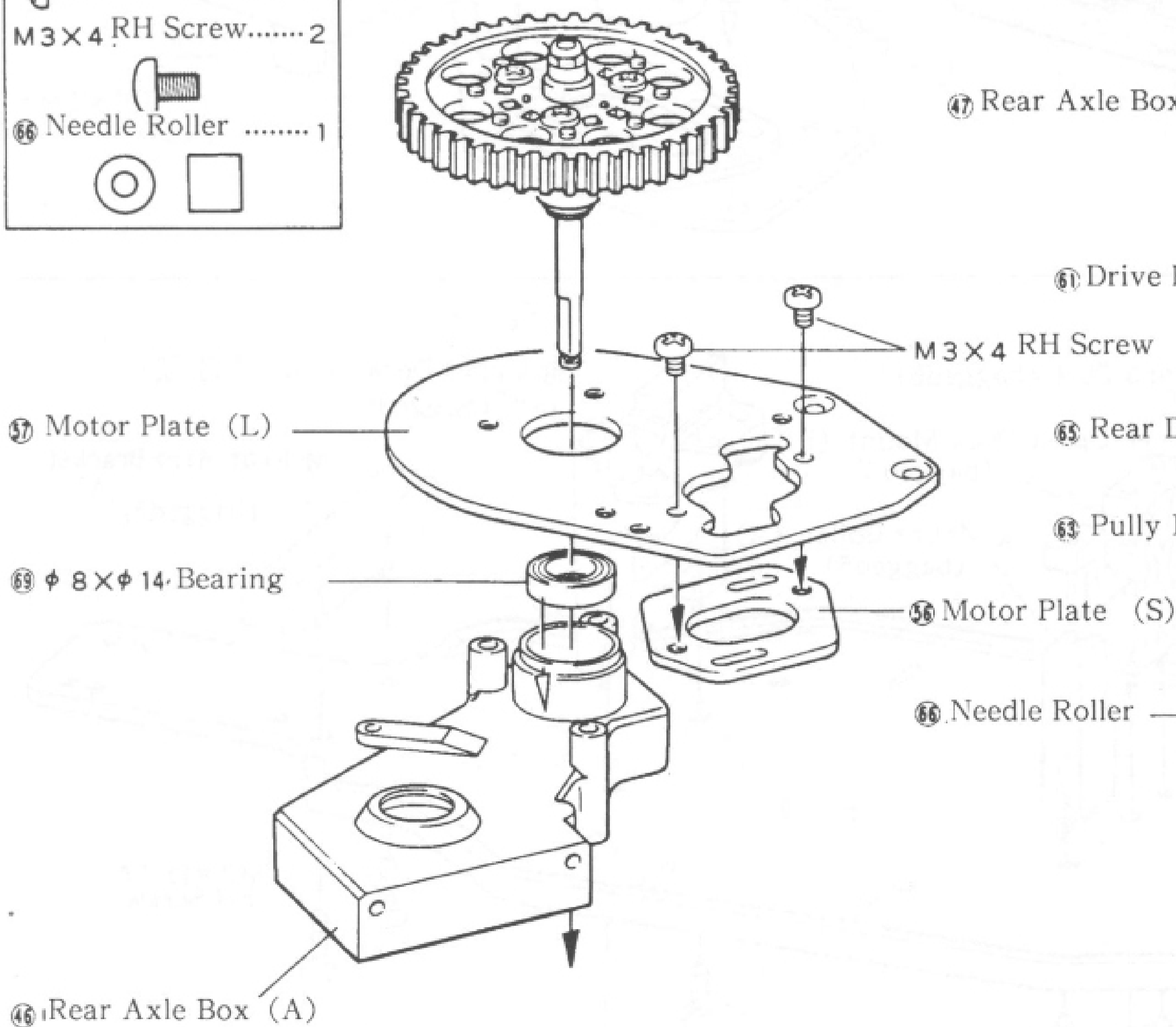


# 7 ASSEMBLY OF REAR AXLE BOX (1)

※ These parts are in (bagged4) .

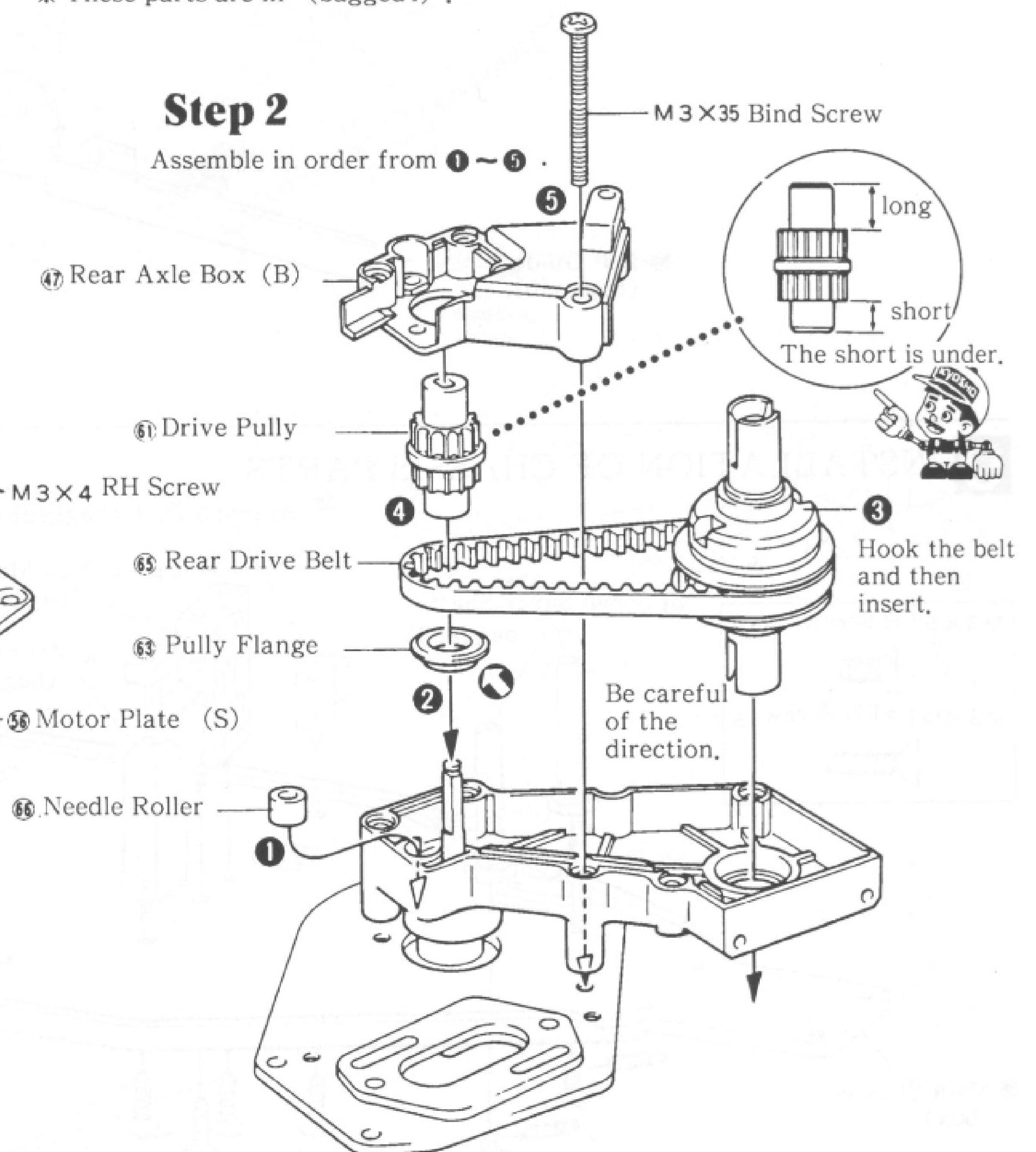
- M3 X 35 Bind Screw ..... 1
- M3 X 4 RH Screw ..... 2
- 66 Needle Roller ..... 1

## Step 1



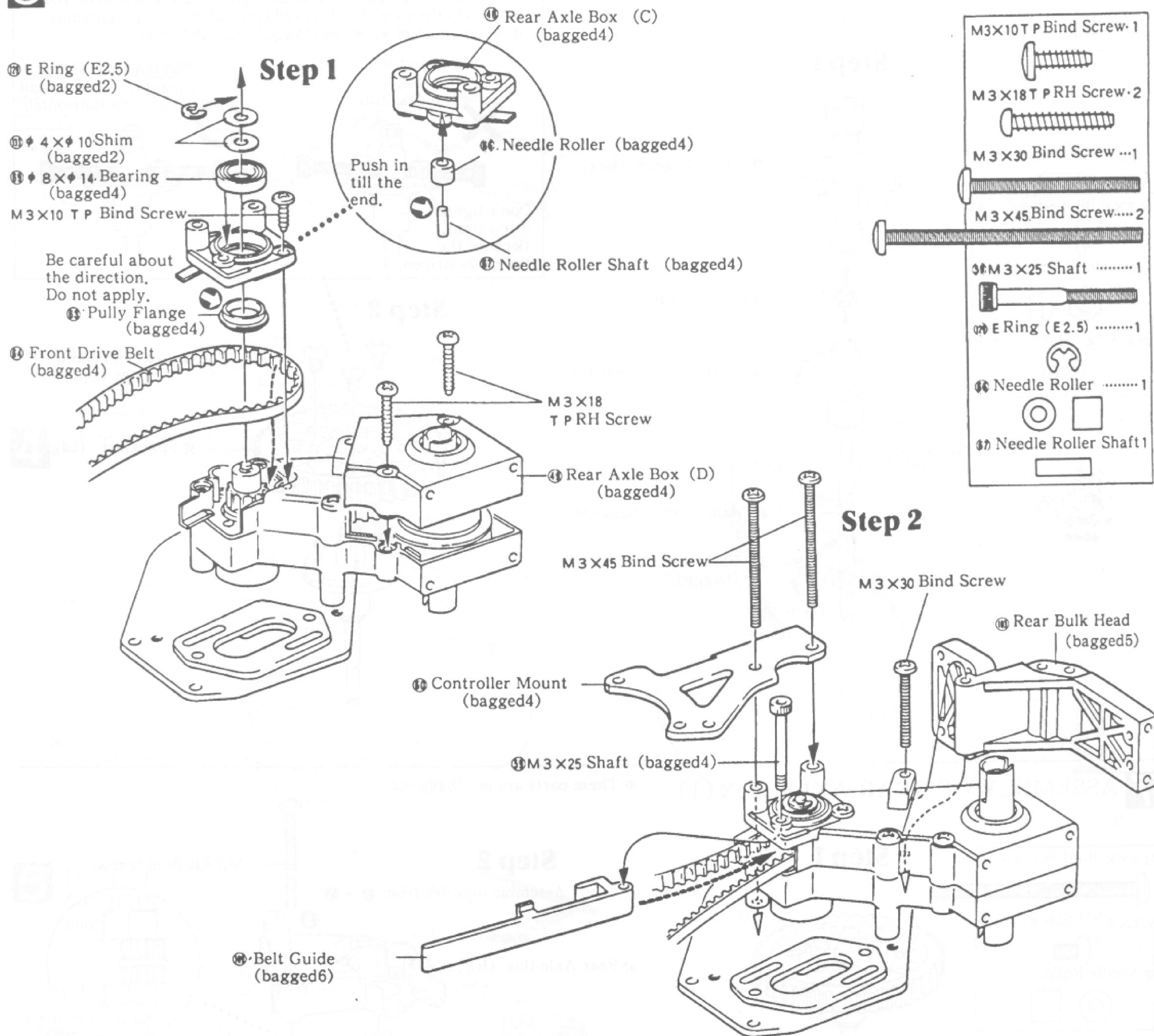
## Step 2

Assemble in order from ① ~ ⑤ .

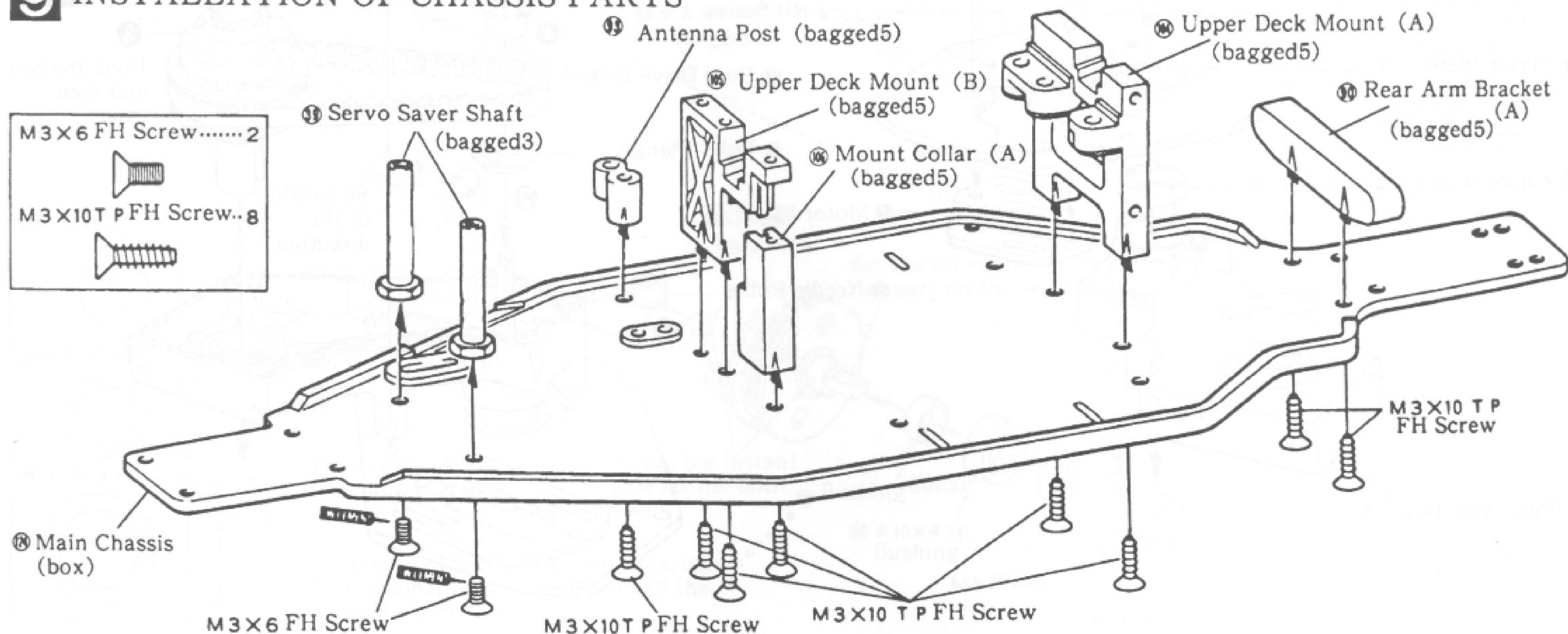




## 8 ASSEMBLY OF REAR AXLE BOX (2)

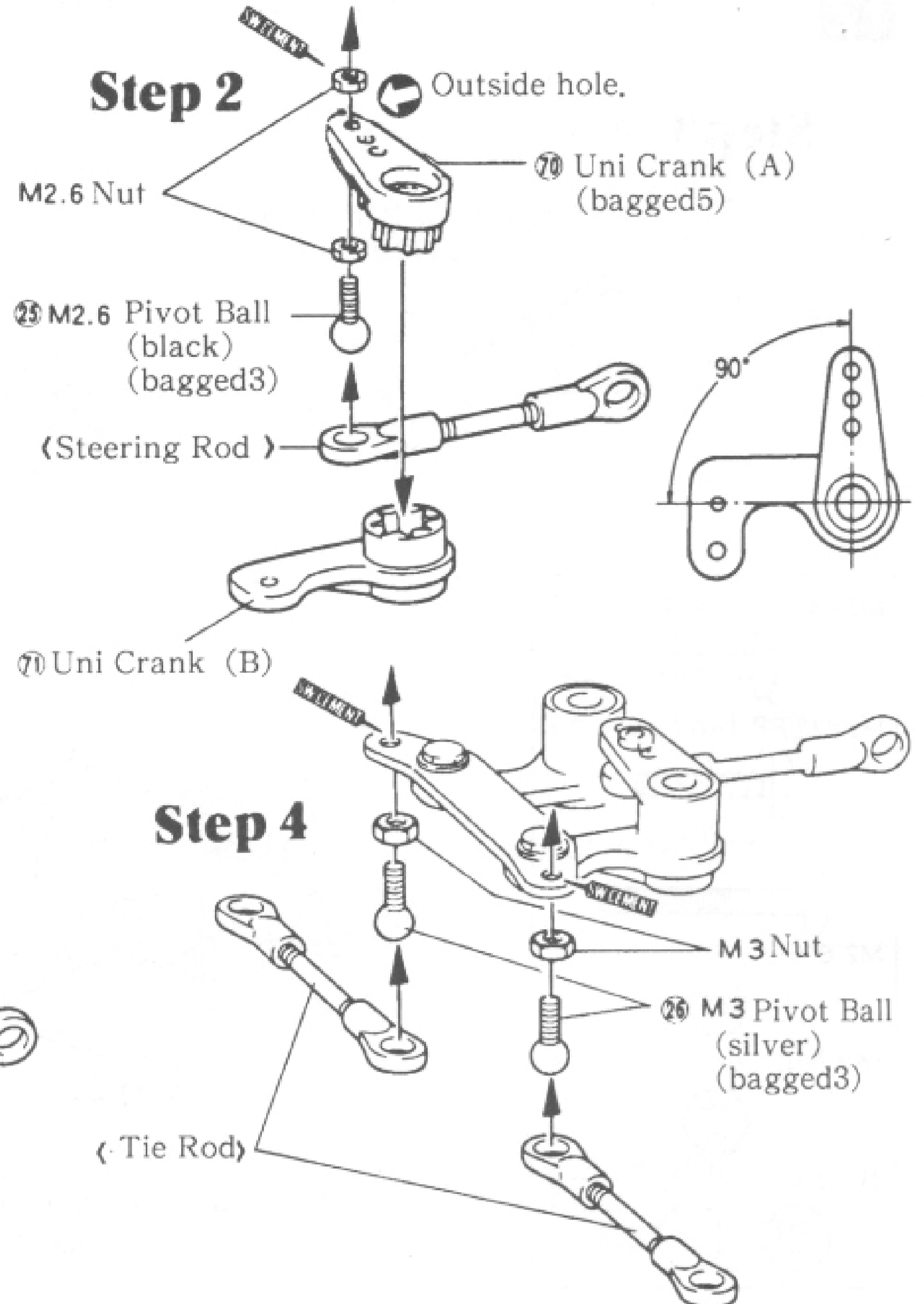
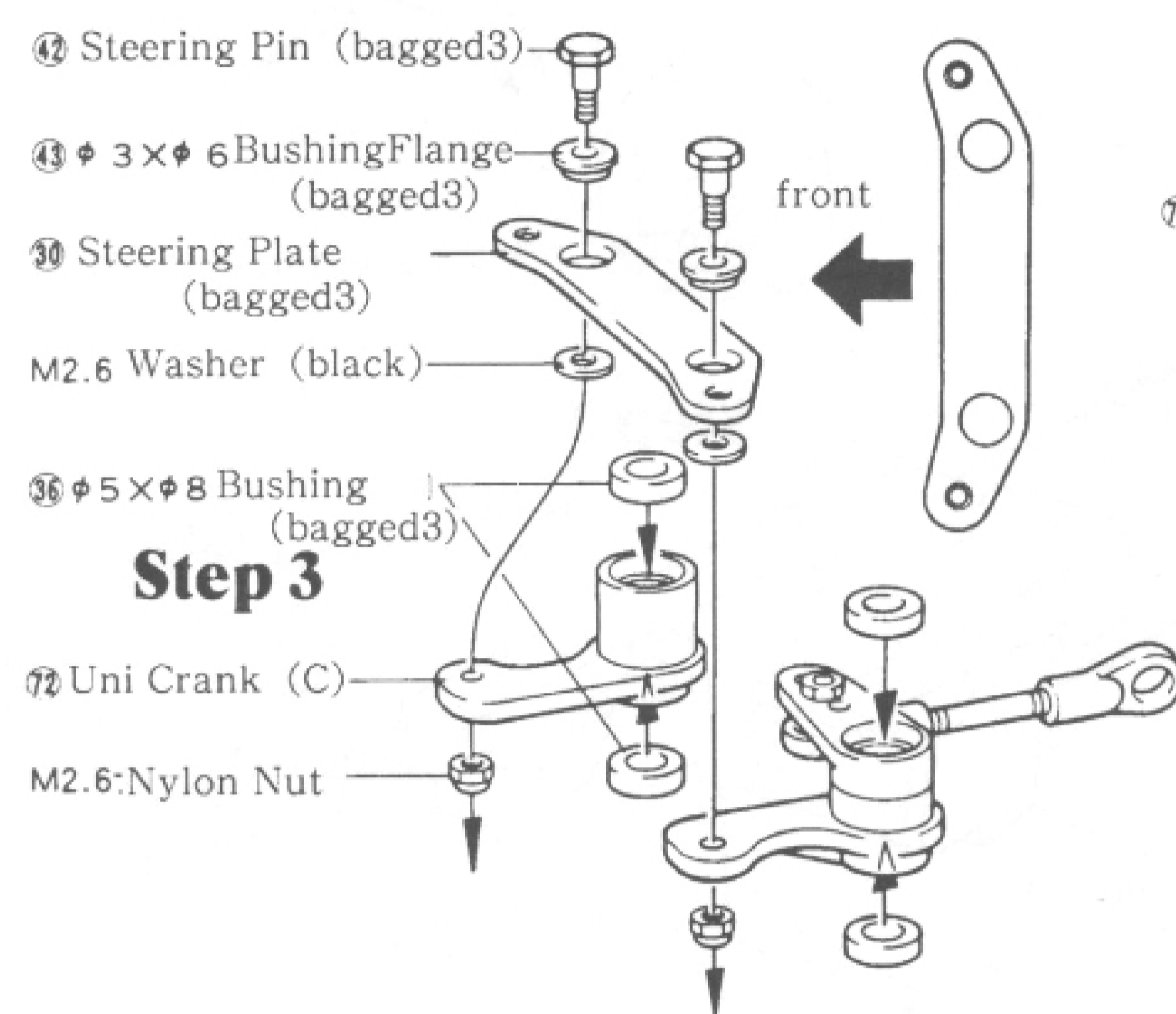
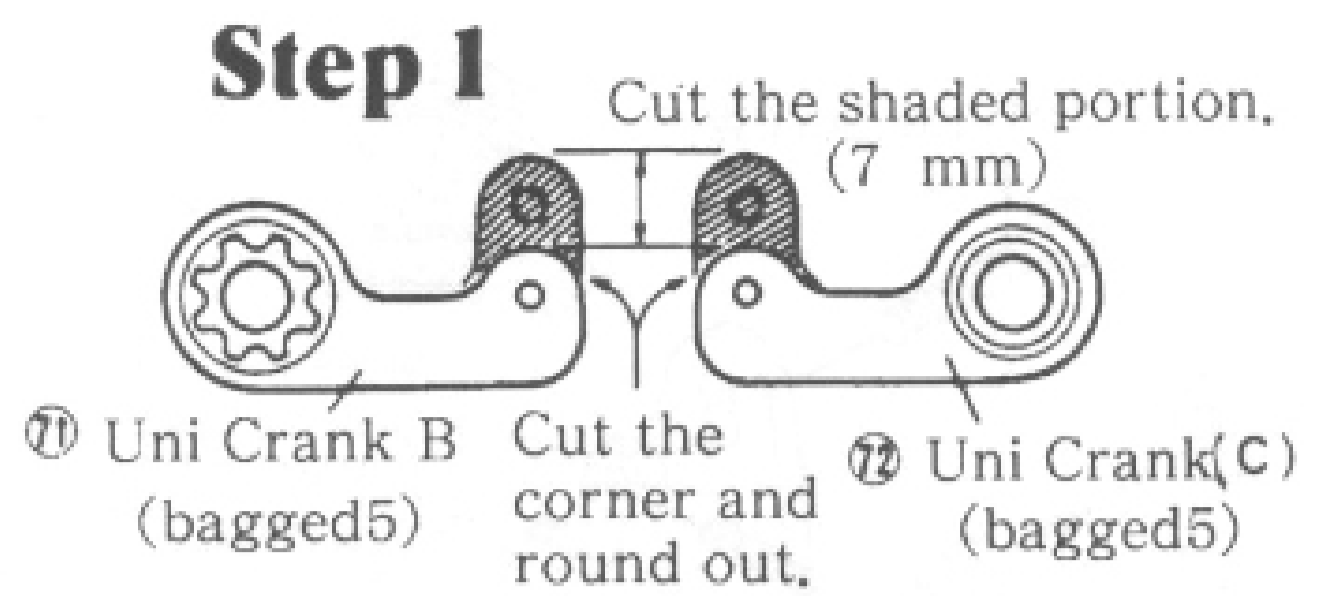


## 9 INSTALLATION OF CHASSIS PARTS



# 10 ASSEMBLY OF UNI CRANK

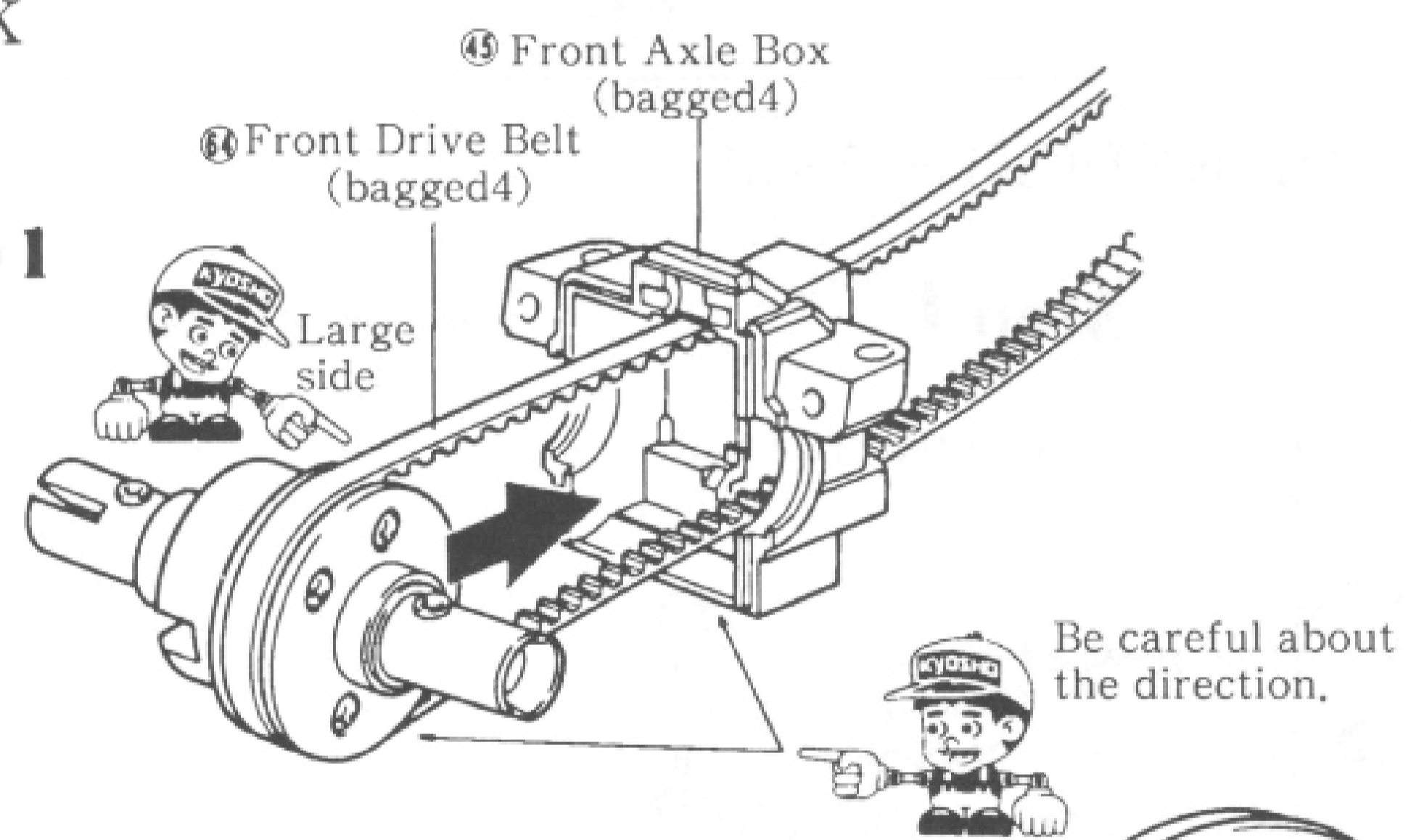
- M2.6 Nut ..... 2
- M3 Nut ..... 2
- M2.6-Nylon Nut ..... 2
- M2.6 Washer (black) · 2
- 25 M2.6 Pivot Ball (black) ... 1 (bagged3)
- 26 M3 Pivot Ball silver 2
- 42 Steering Pin ..... 2
- 43 φ3×φ6 Bushing .. 2 flange
- 36 φ 5×φ 8 Bushing... 4



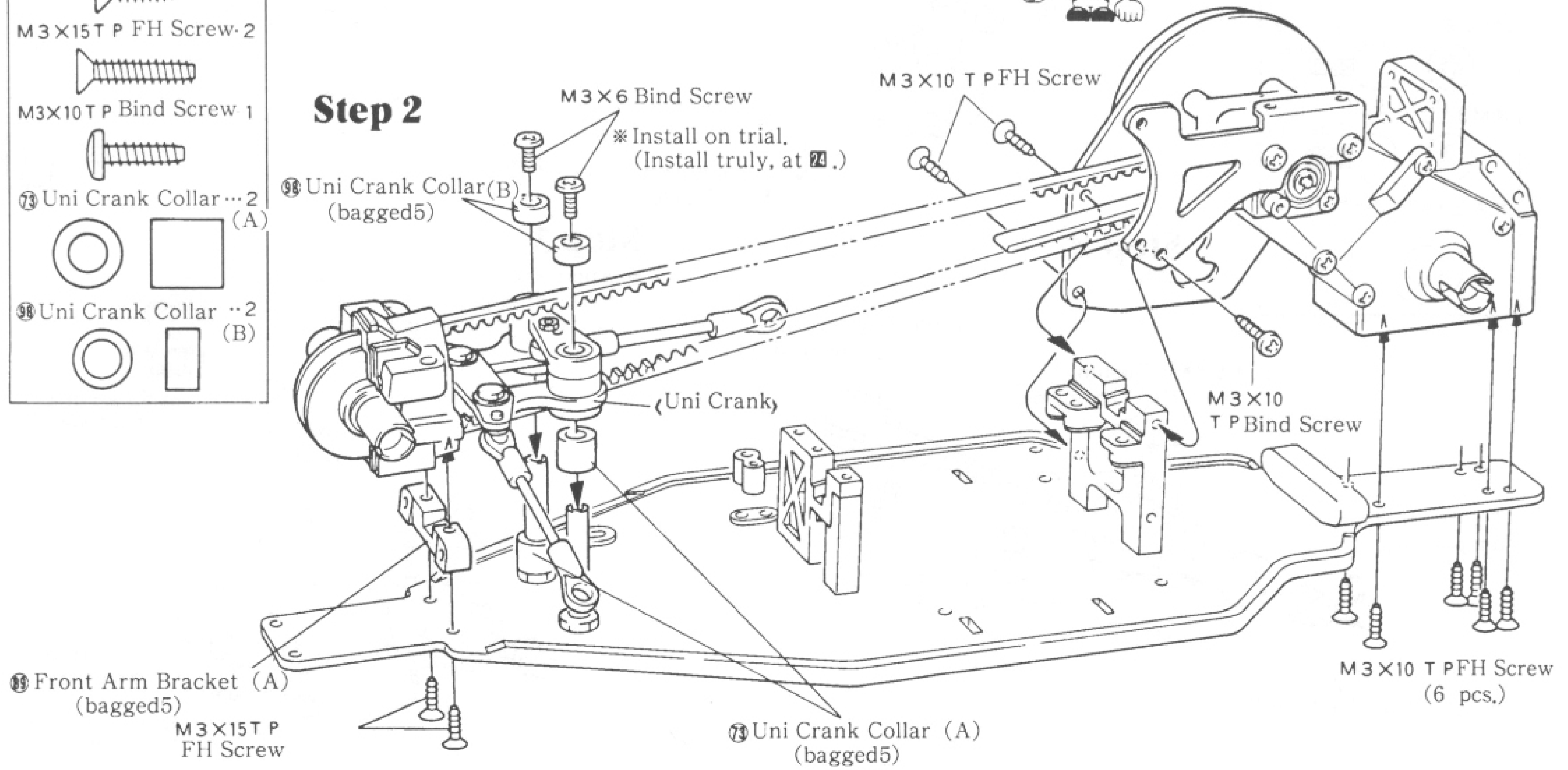
# 11 INSTALLATION OF UNI CRANK & AXLE BOX

- M3×6 Bind Screw.... 2
- M3×10T PFH Screw·8
- M3×15T P FH Screw·2
- M3×10T P Bind Screw 1
- 73 Uni Crank Collar ... 2 (A)
- 74 Uni Crank Collar ... 2 (B)

**Step 1**

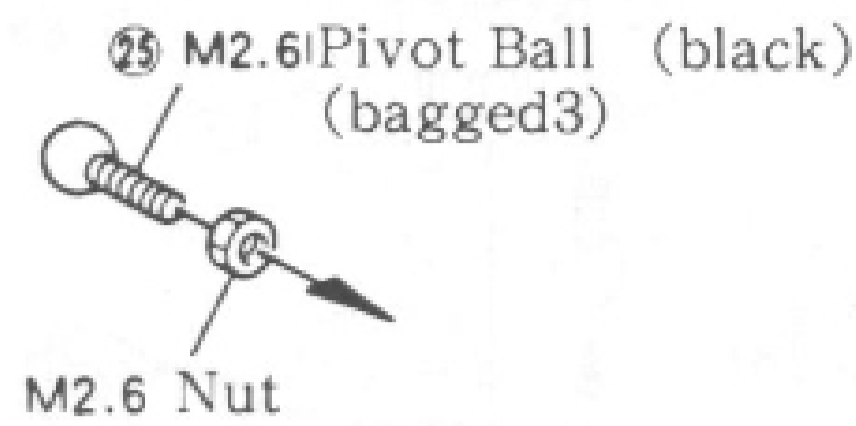


**Step 2**



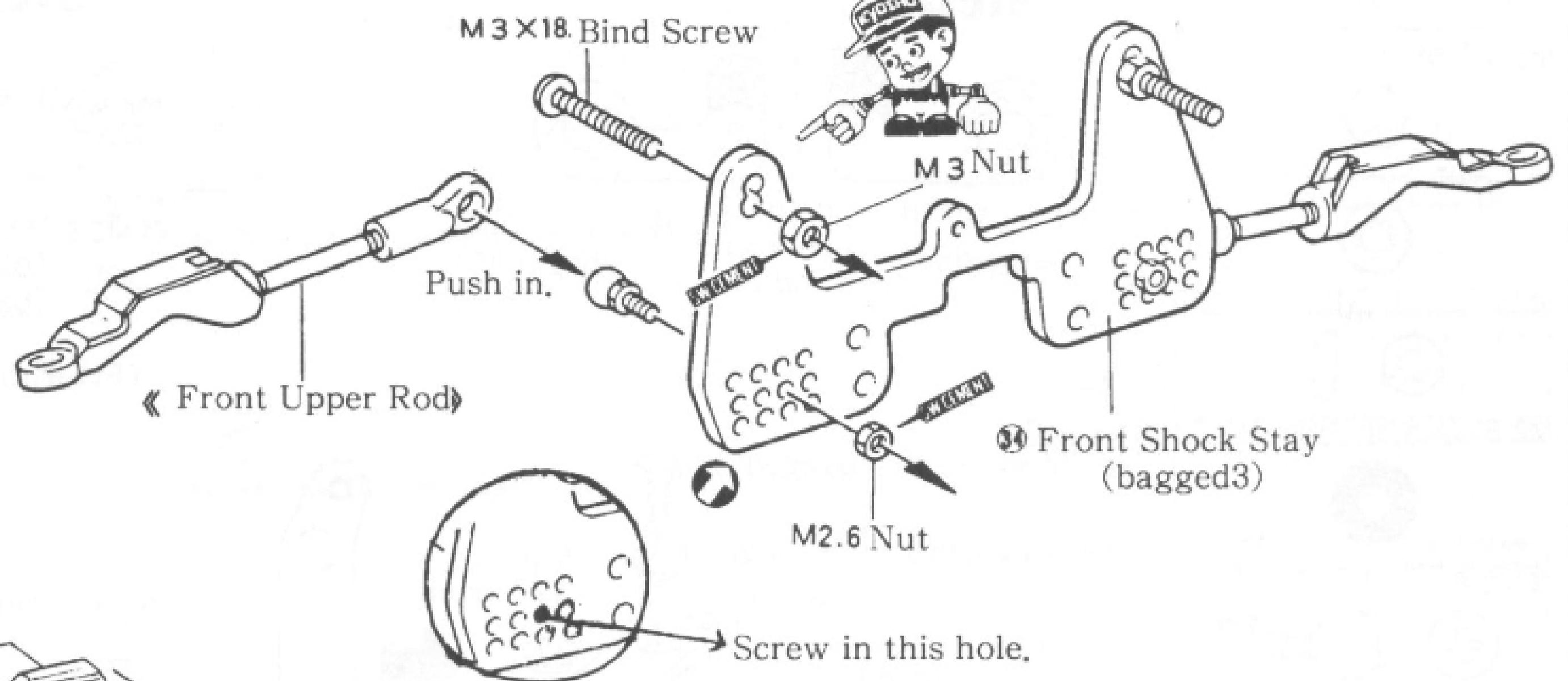
# 12 INSTALLATION OF FRONT SHOCK STAY

## Step 1 \* Assemble 2 pcs.



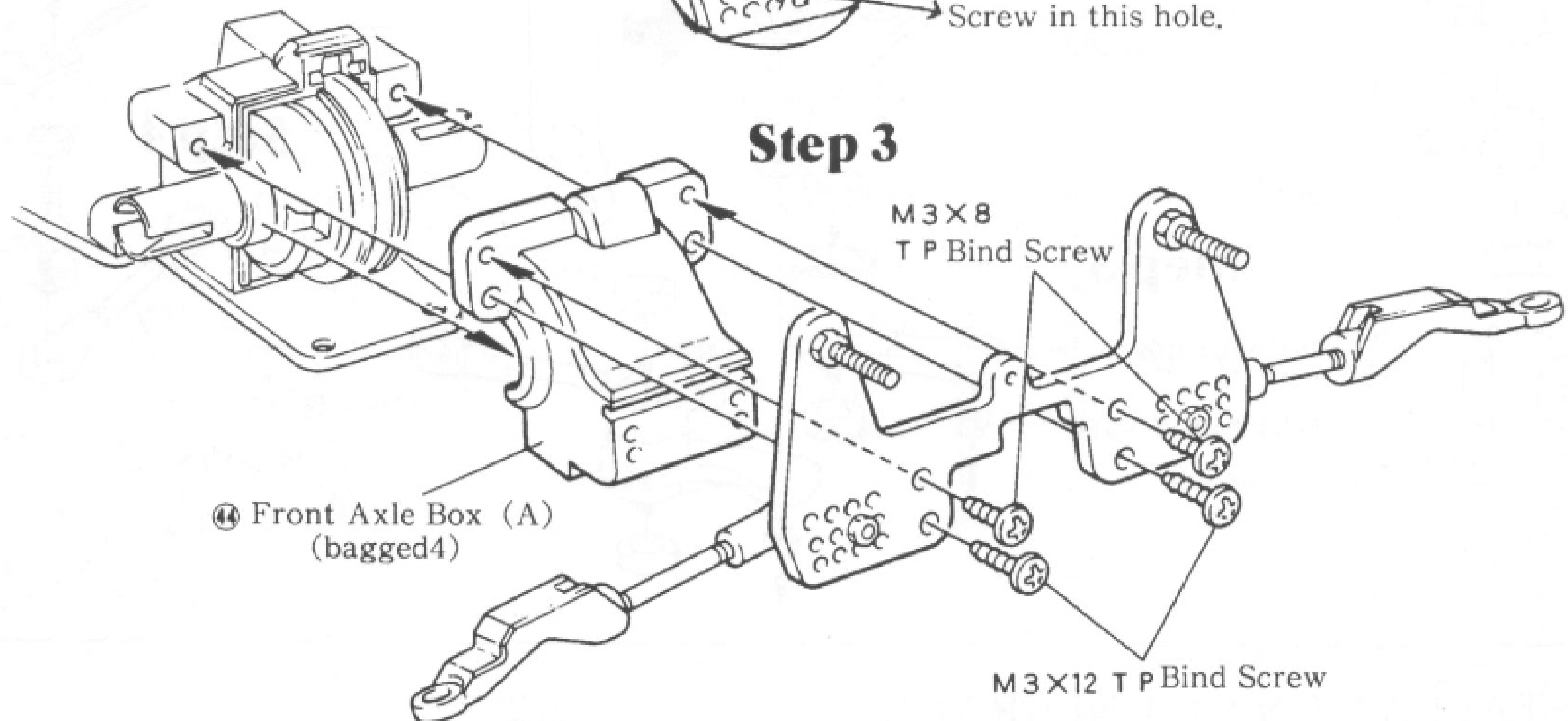
## Step 2

4WD Scale Car → Upper hole  
4WD Buggy Car → Under hole



- M3x8 T P Bind Screw... 2
- M3x12 T P Bind Screw 2
- M3x18 Bind Screw... 2
- M2.6 Nut ..... 4
- M3 Nut ..... 2
- M2.6 Pivot Ball ... 2 (black)

## Step 3

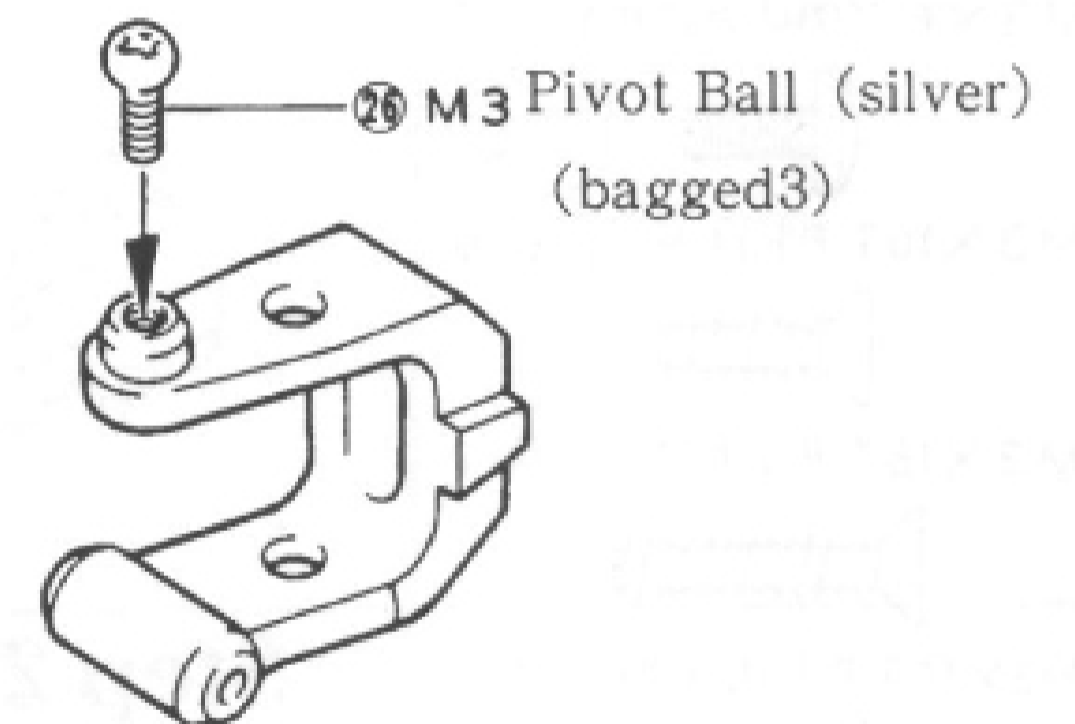
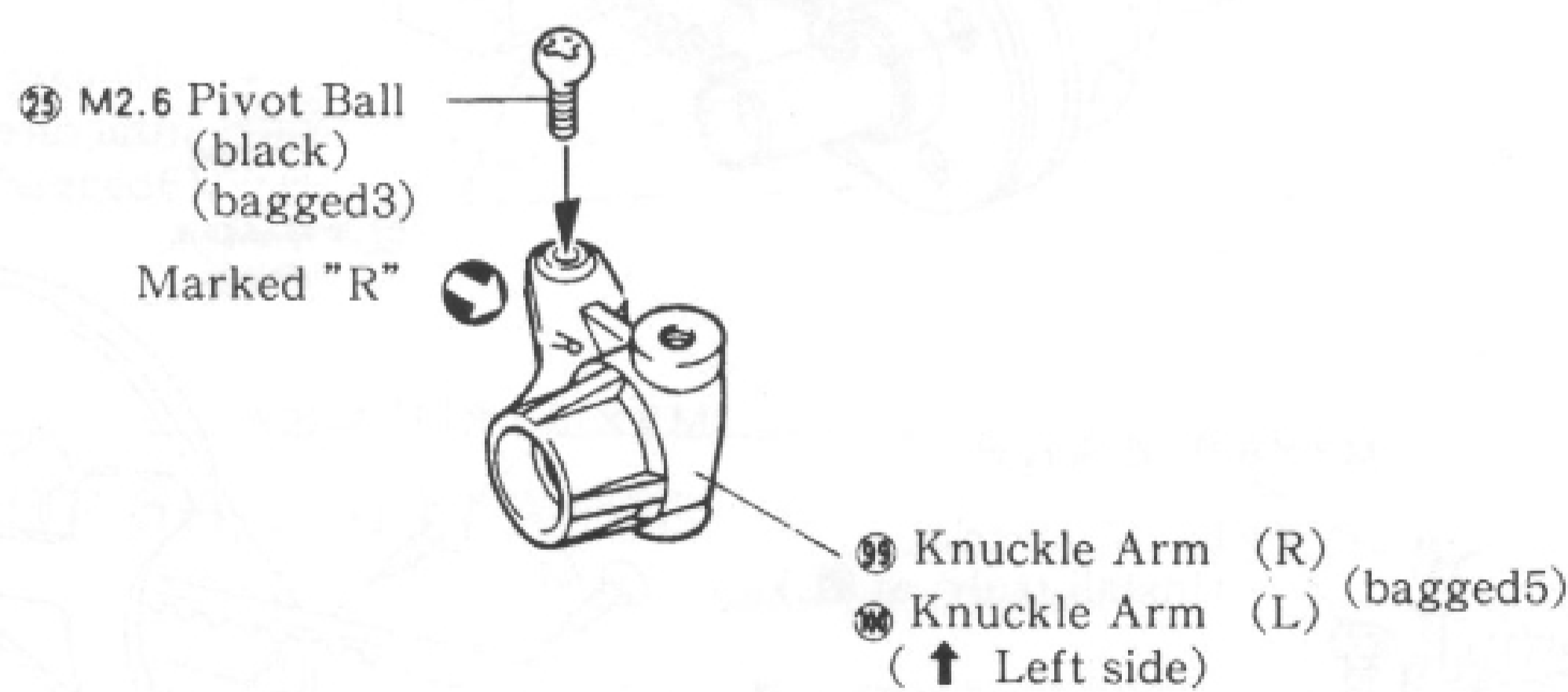


# 13 ASSEMBLY OF KNUCKLE ARM

## Step 1

\* Assemble the left side in the same way.

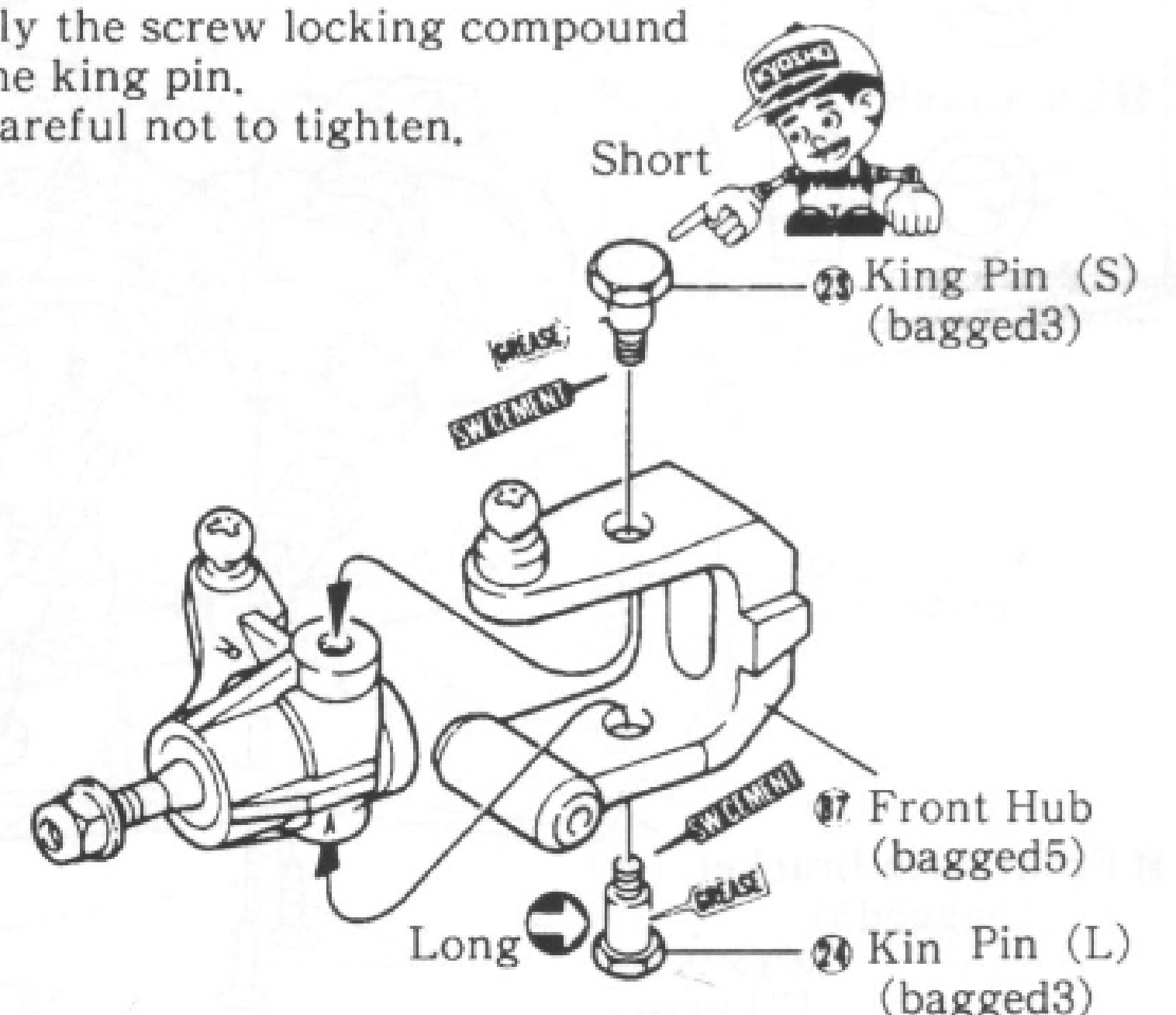
Install the pivot ball.



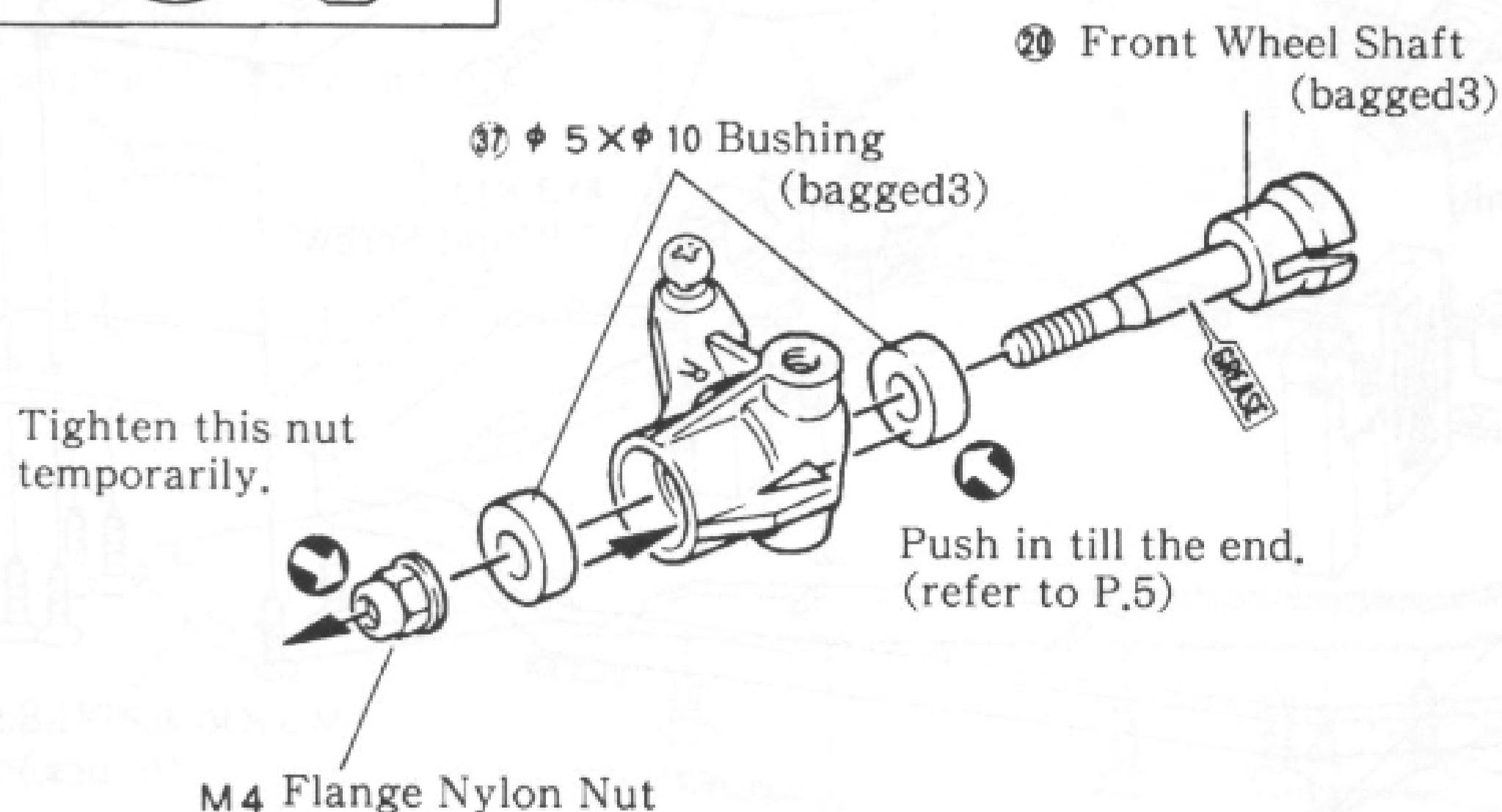
## Step 2

## Step 3

\* Apply the screw locking compound to the king pin. Be careful not to tighten.



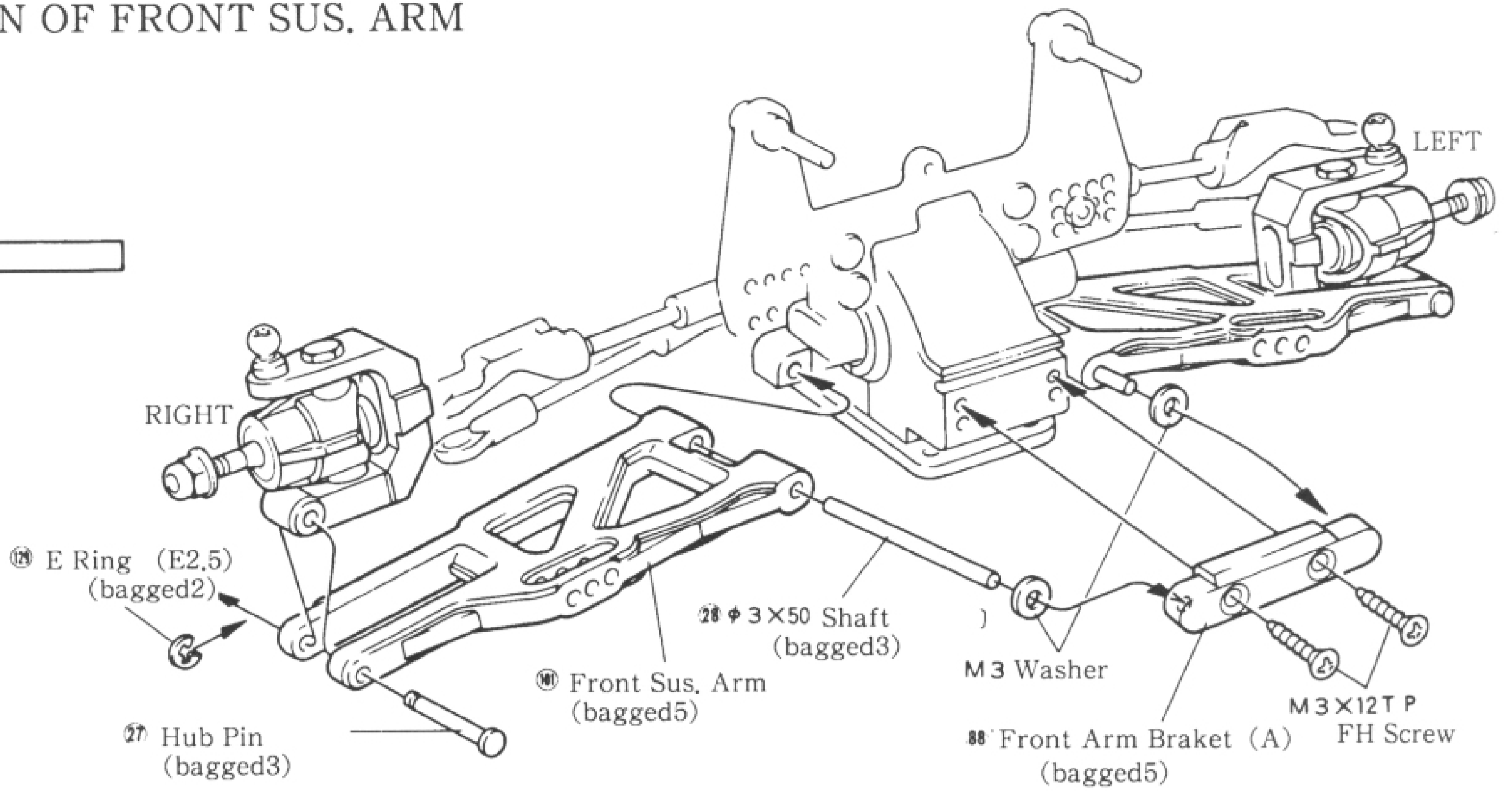
- M4 Flange Nylon..... 2 Nut
- King Pin (S)... 2
- King Pin (L)... 2
- M2.6 Pivot Ball ... 2 (black)
- M3 Pivot Ball ..... 2 (silver)
- φ 5 × φ 10 Bushing... 4





# 14 INSTALLATION OF FRONT SUS. ARM

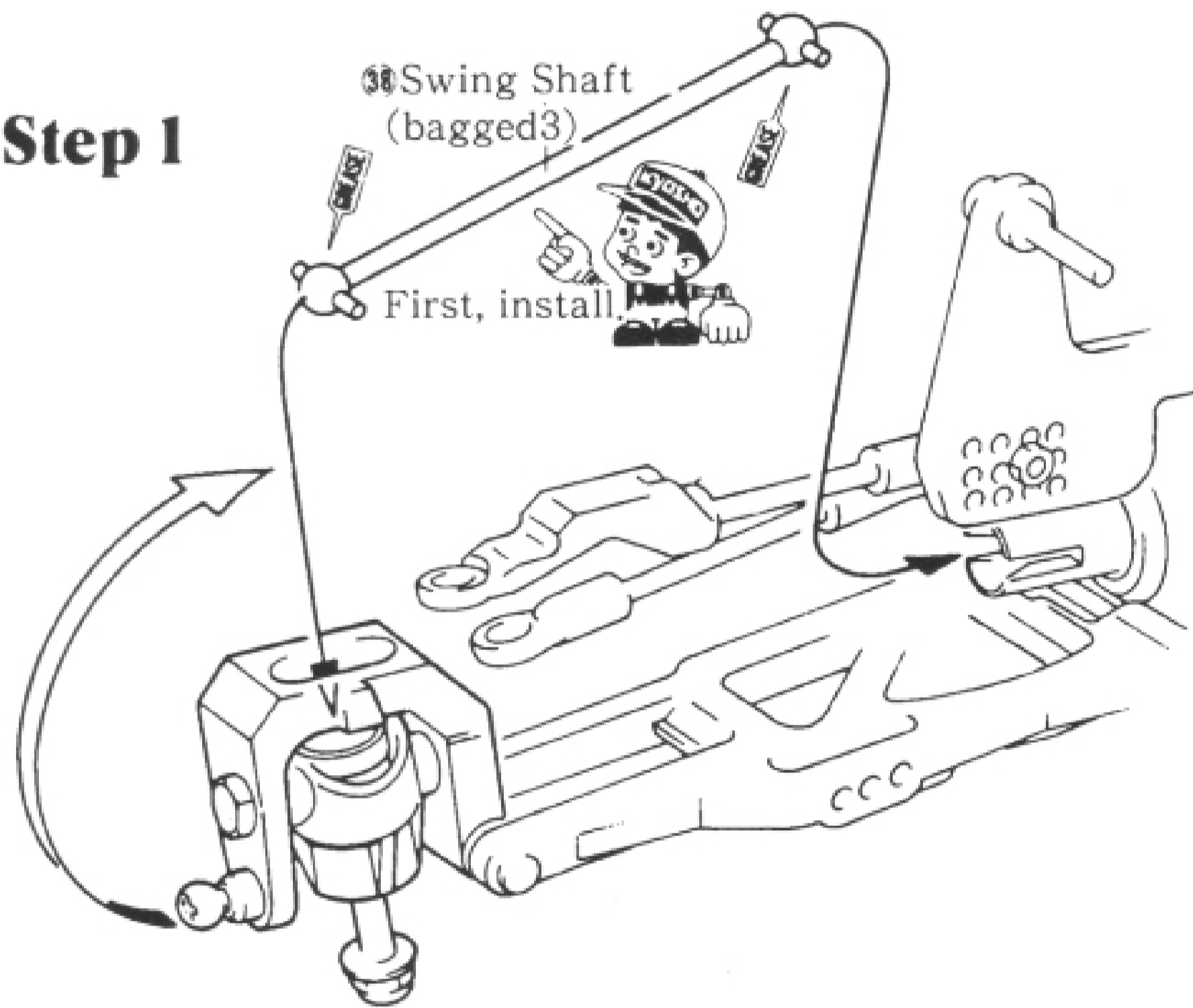
- ⑳  $\phi$  3×50 Shaft ..... 2
- M3×12T PFH Screw· 2
- M3 Washer ..... 2
- ㉑ Hub Pin..... 2
- ㉒ E Ring (E2,5)..... 2



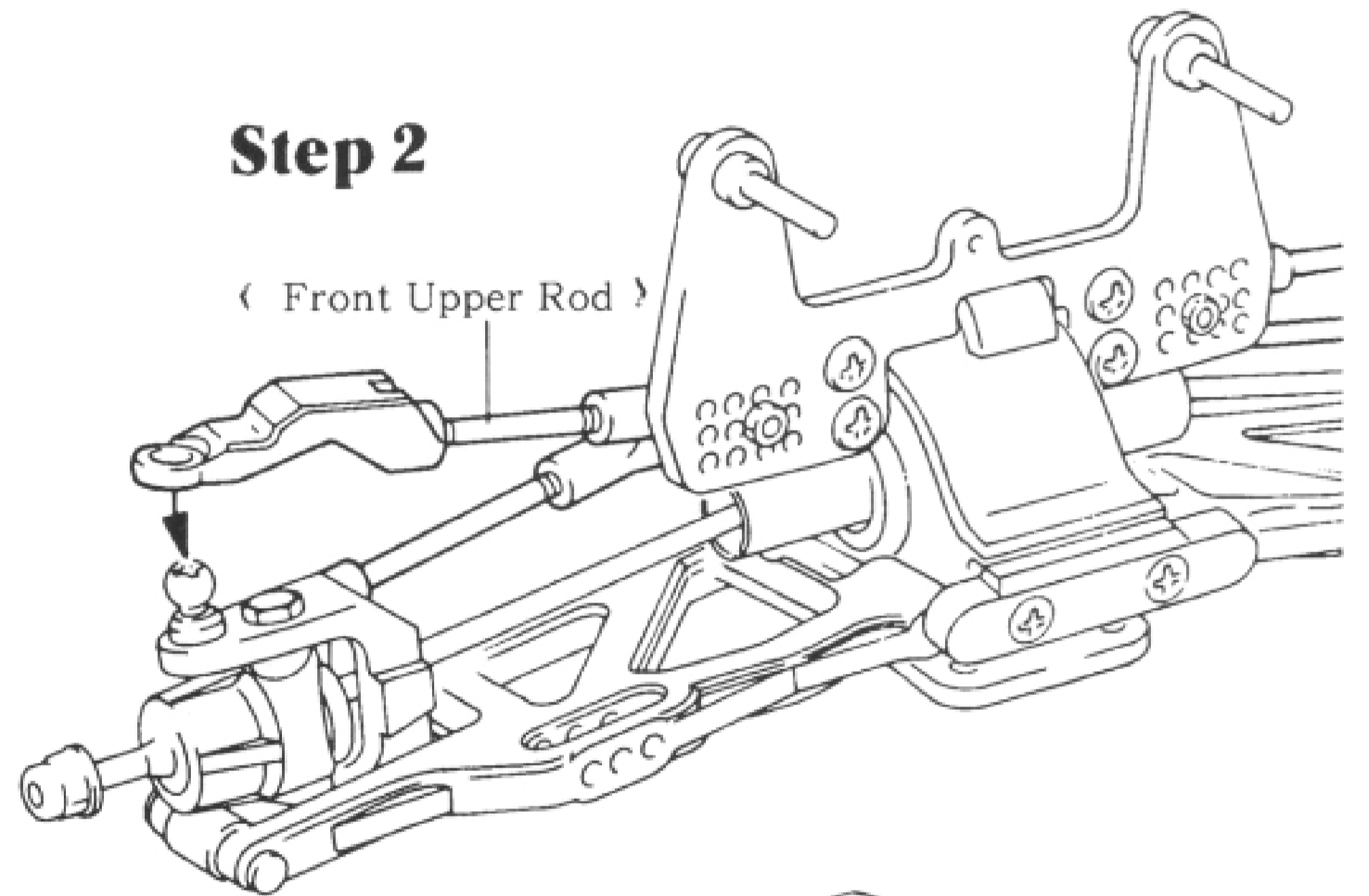
# 15 INSTALLATION OF KNUCKLE ARM

※ These are assembly of the right side.  
In the same way, assemble the left side.

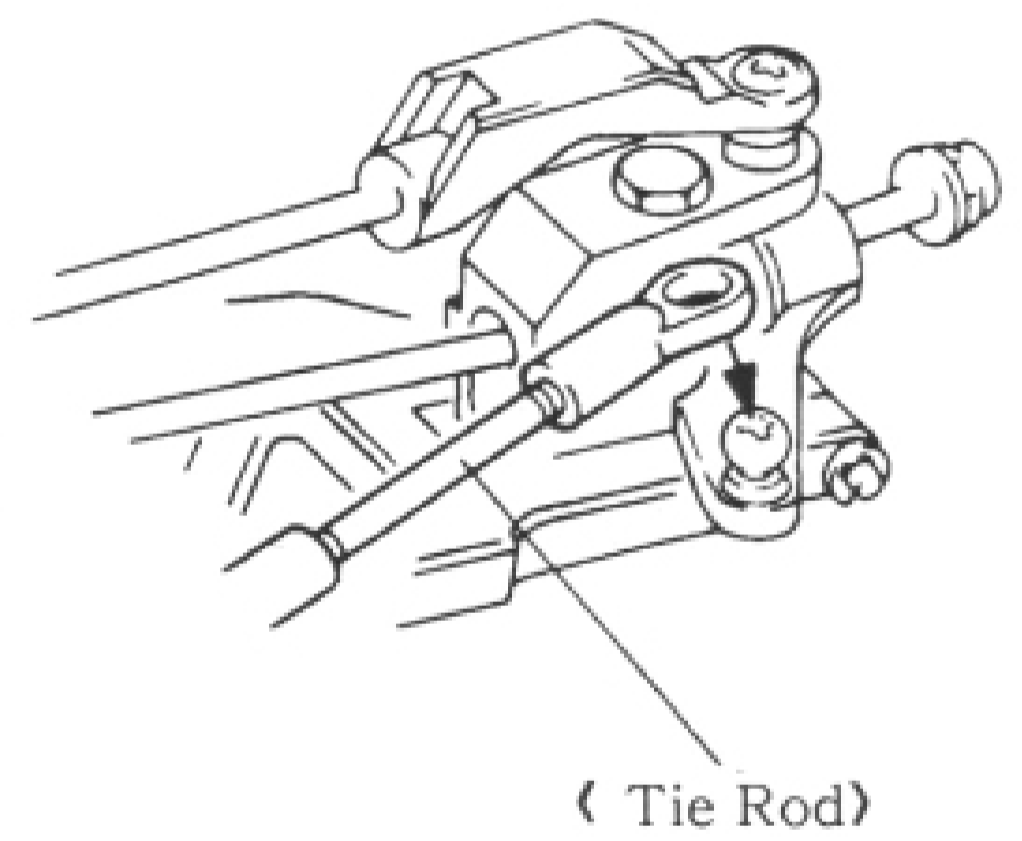
## Step 1



## Step 2

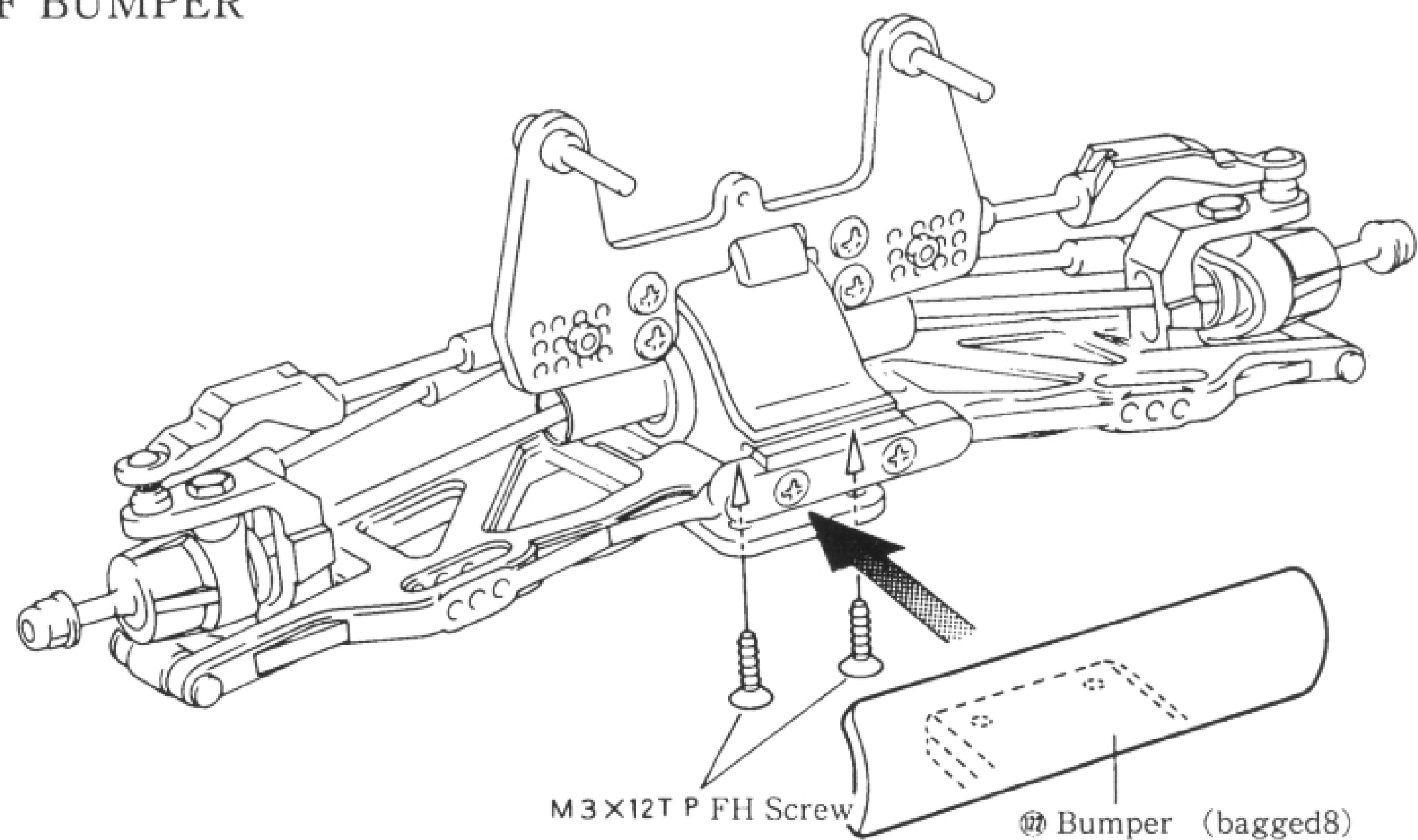


## Step 3

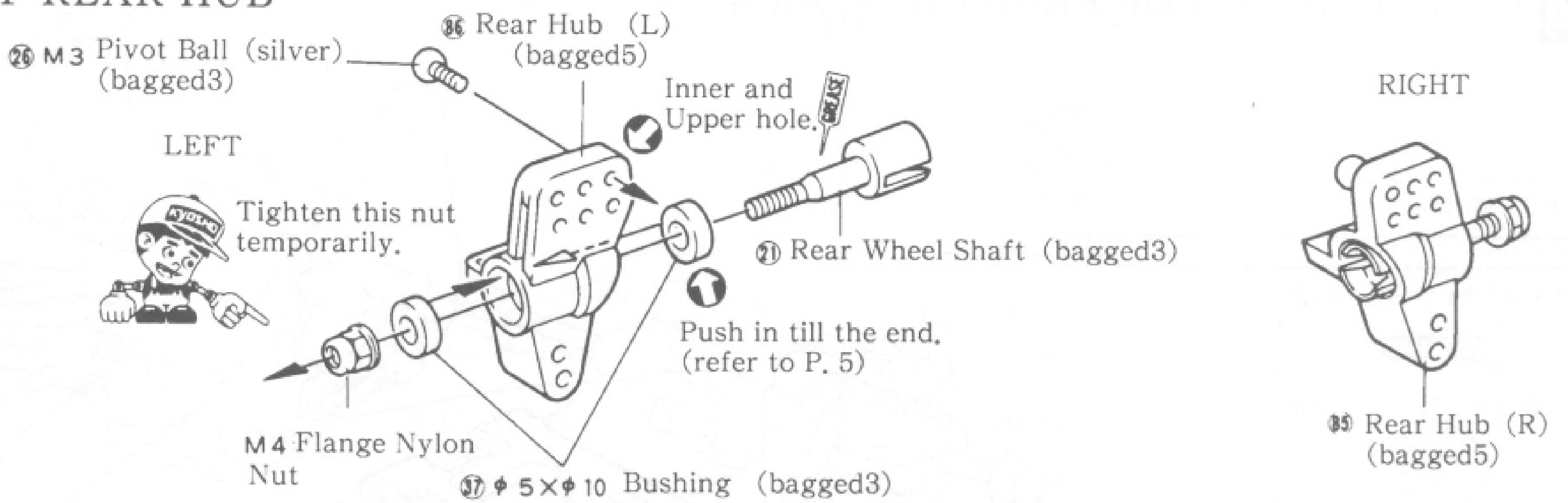
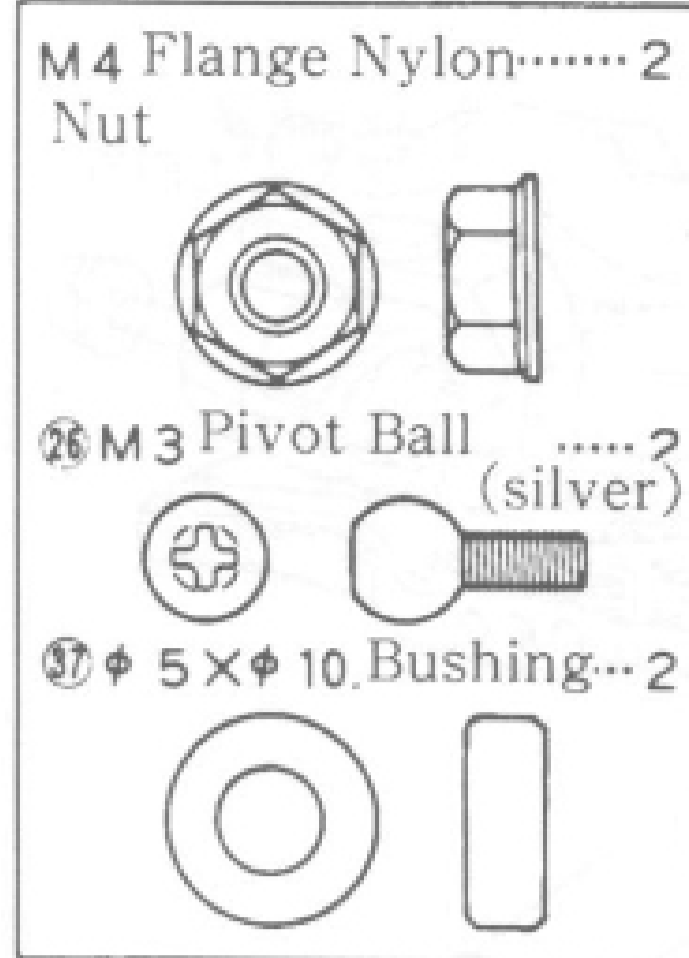


# 16 INSTALLATION OF BUMPER

- M3×12T P FH Screw· 2

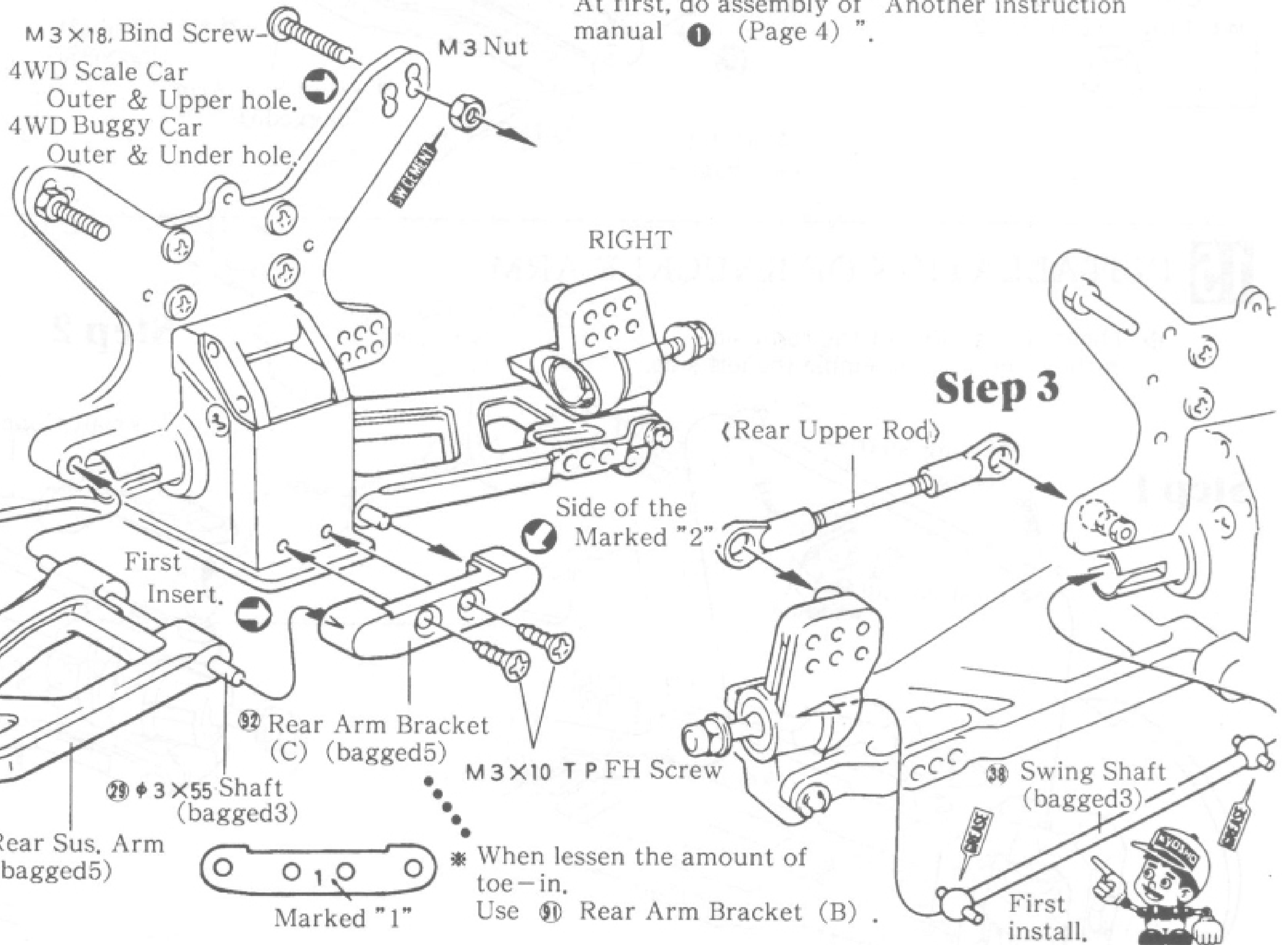
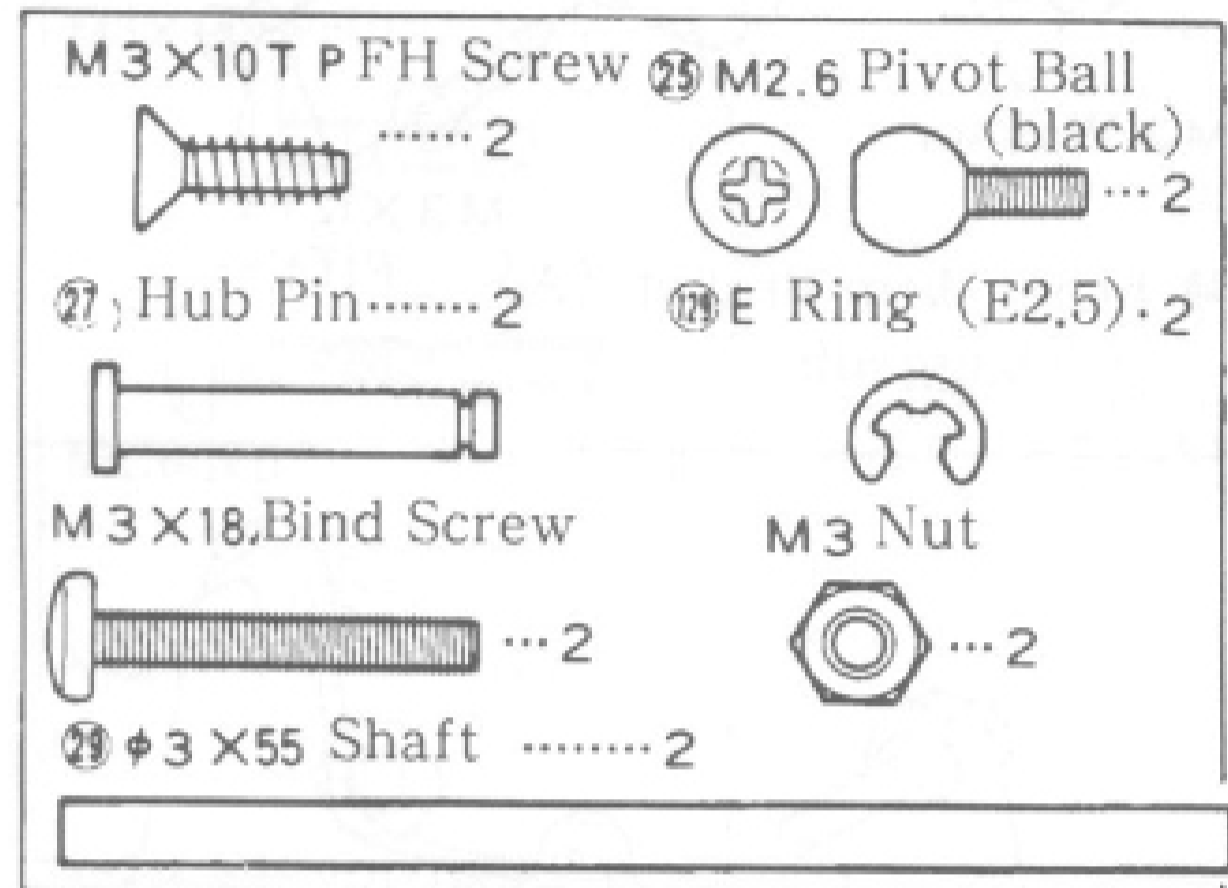


# 17 ASSEMBLY OF REAR HUB



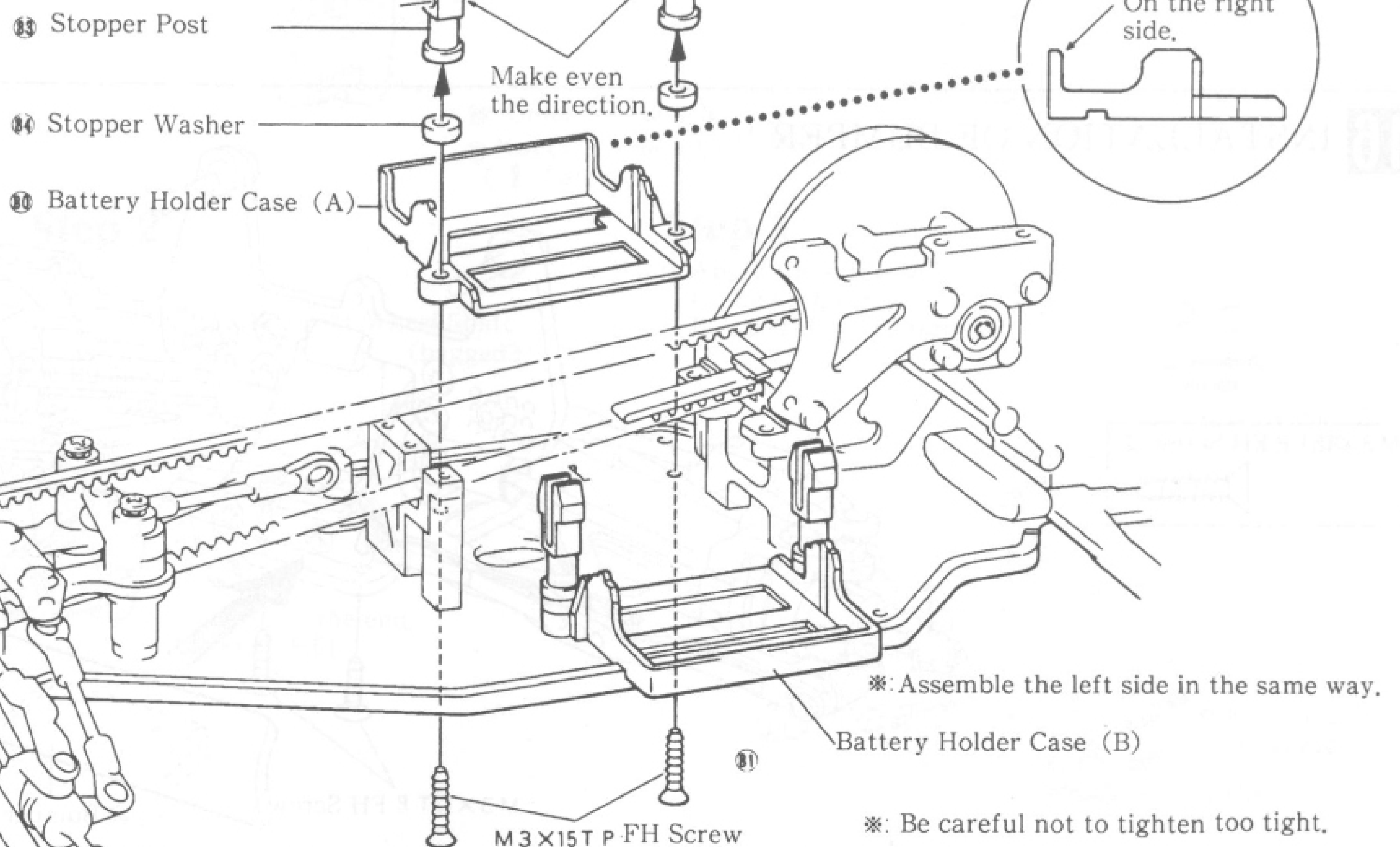
# 18 INSTALLATION OF REAR SUS. ARM & REAR HUB

\* Before you assemble these parts..... At first, do assembly of "Another instruction manual 1 (Page 4)".



# 19 INSTALLATION OF BATTERY HOLDER

\* These parts are in (bagged5).







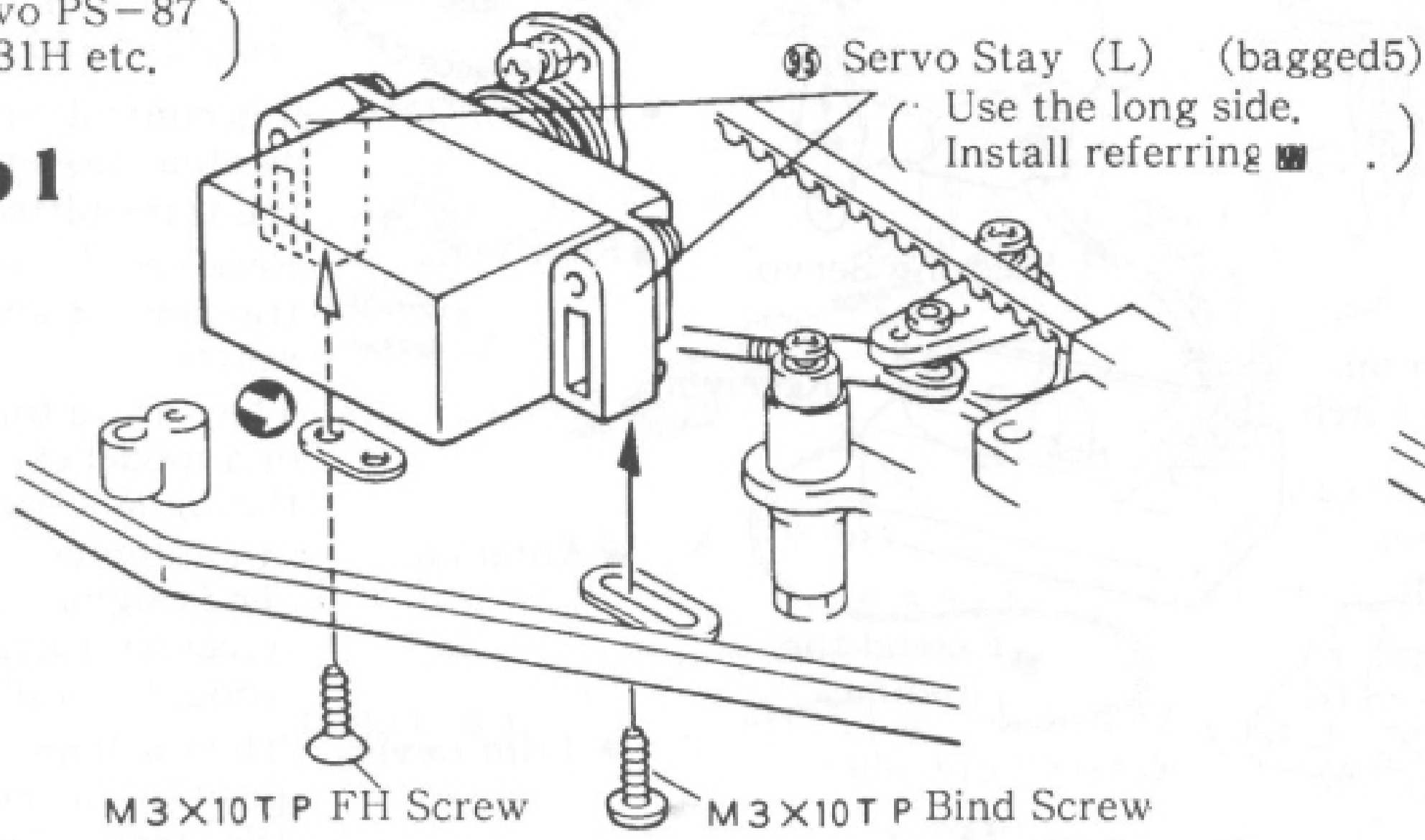
## 23 STEERING SERVO LINKAGE

( In case of using the large servo.)

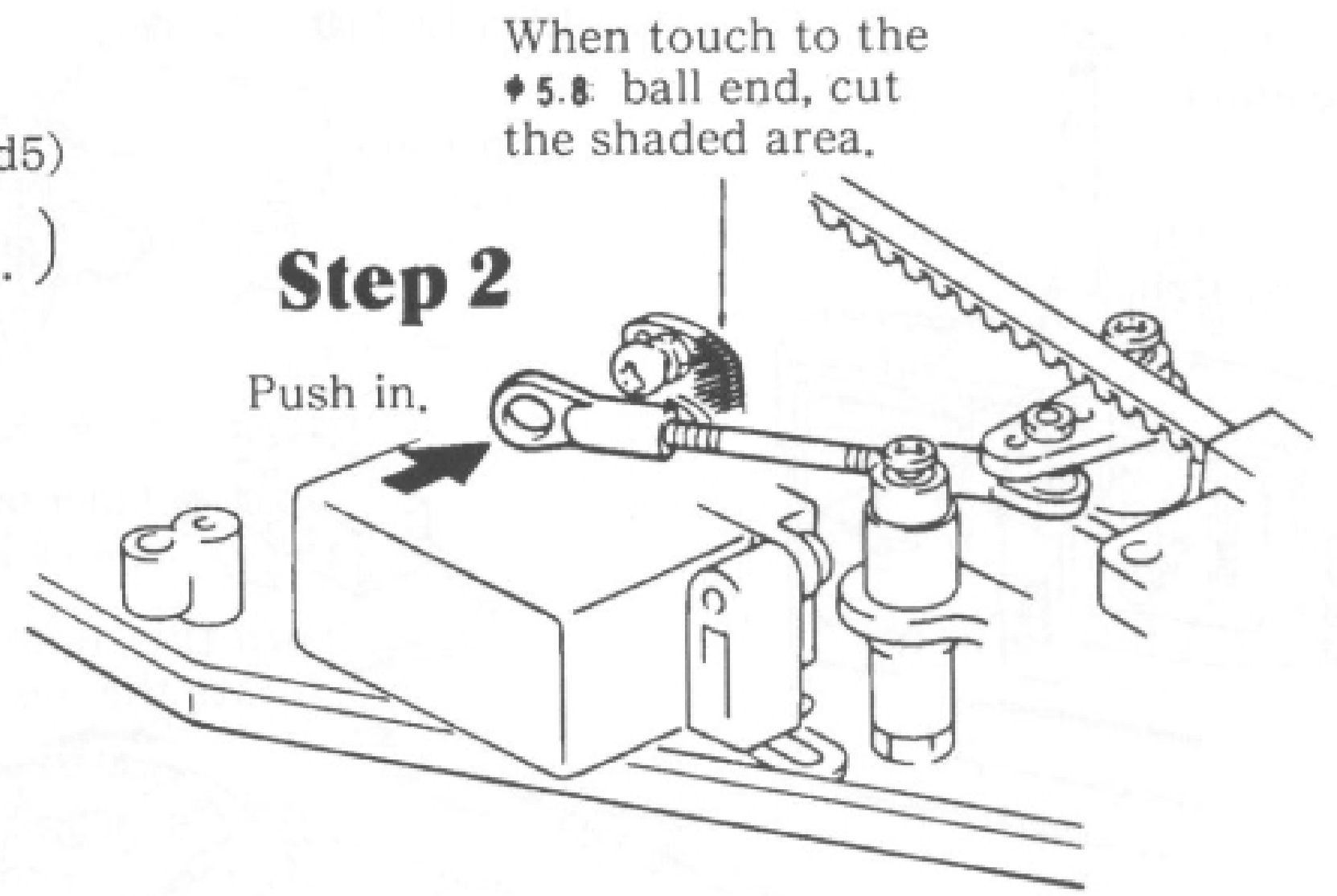
( KO FET Servo PS-87  
Futaba S-131H etc. )

\* Install the servo to the front holes.  
When the servo touch the body install  
the rear holes as shown below.

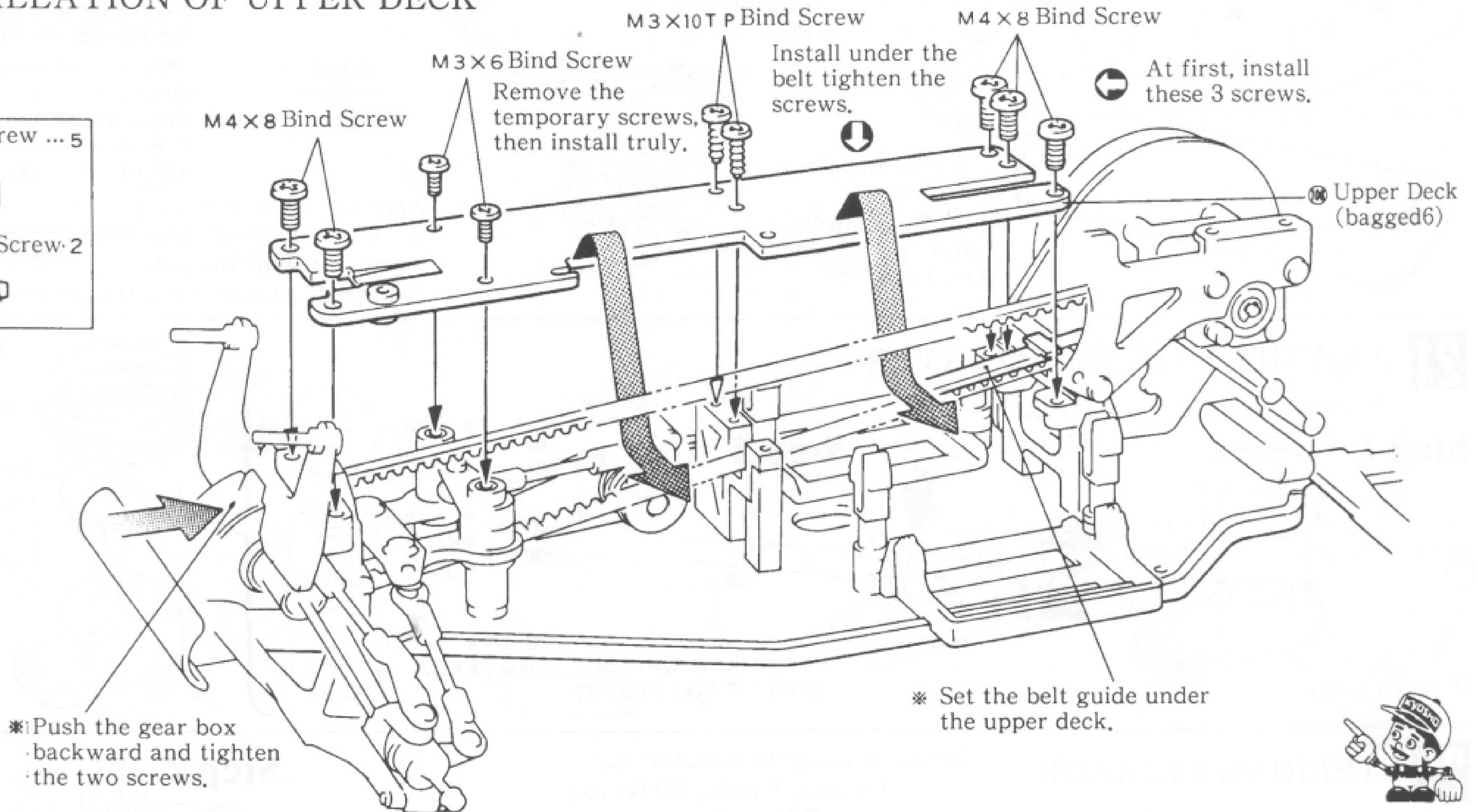
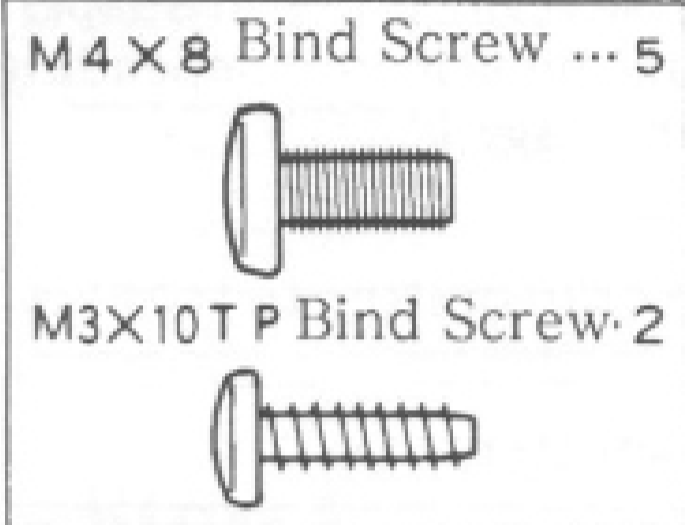
### Step 1



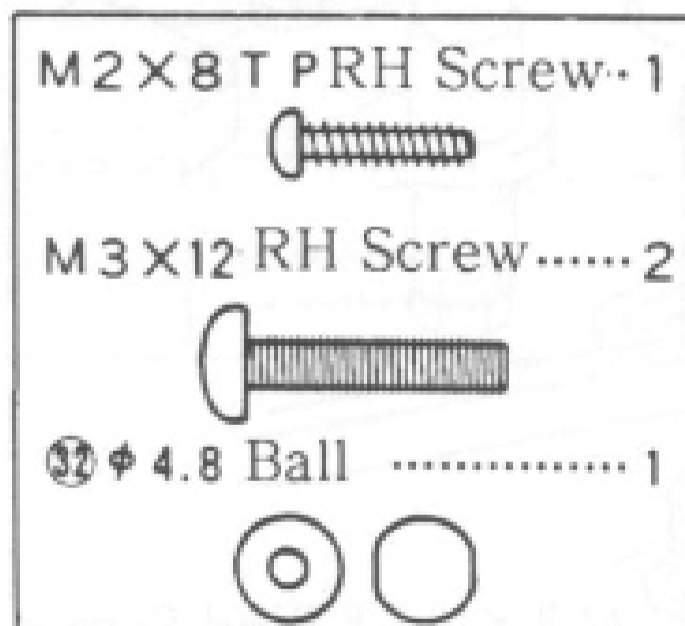
### Step 2



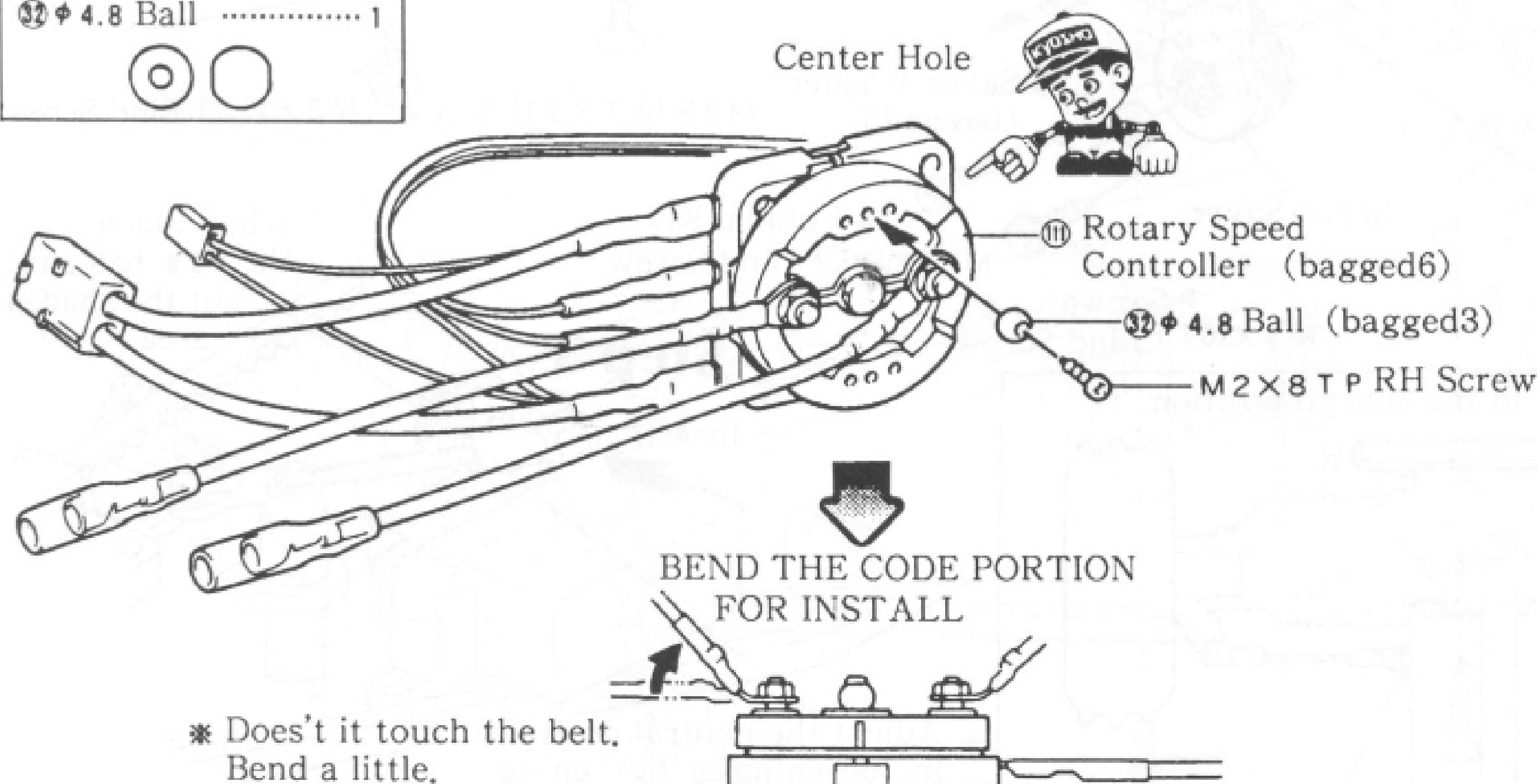
## 24 INSTALLATION OF UPPER DECK



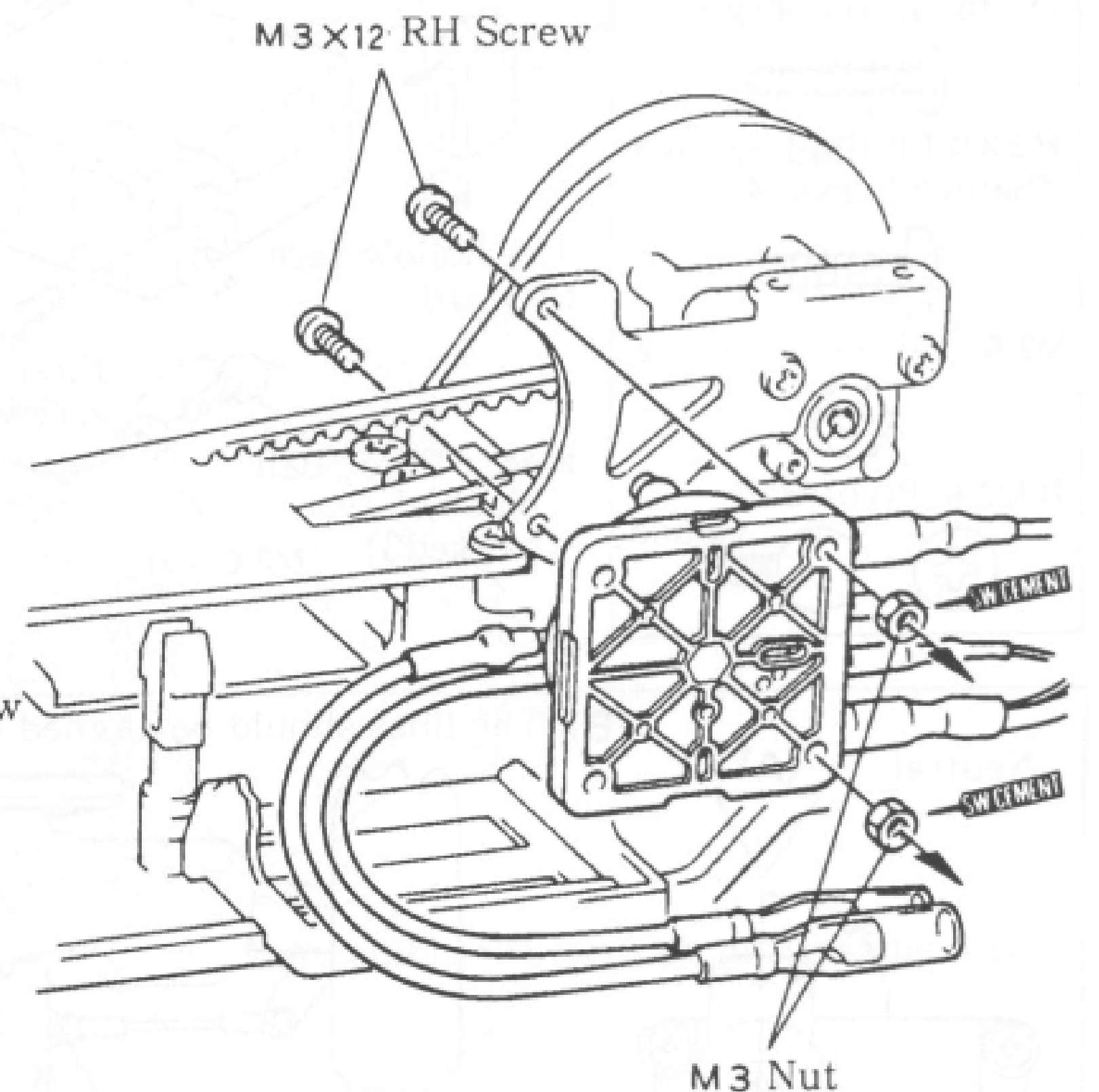
## 25 INSTALLATION OF CONTROLLER



### Step 1



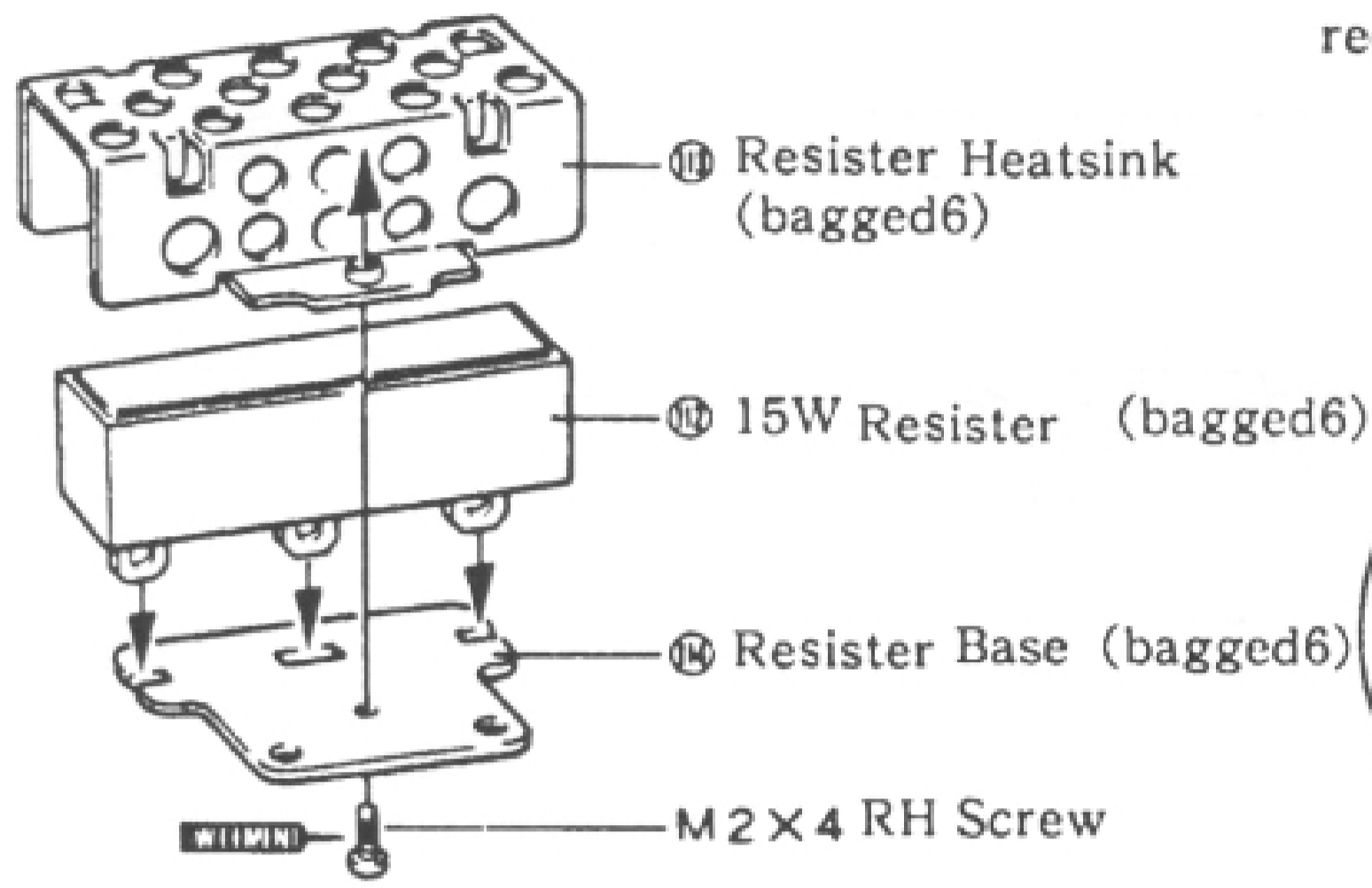
### Step 2



## 26 INSTALLATION OF RESISTER

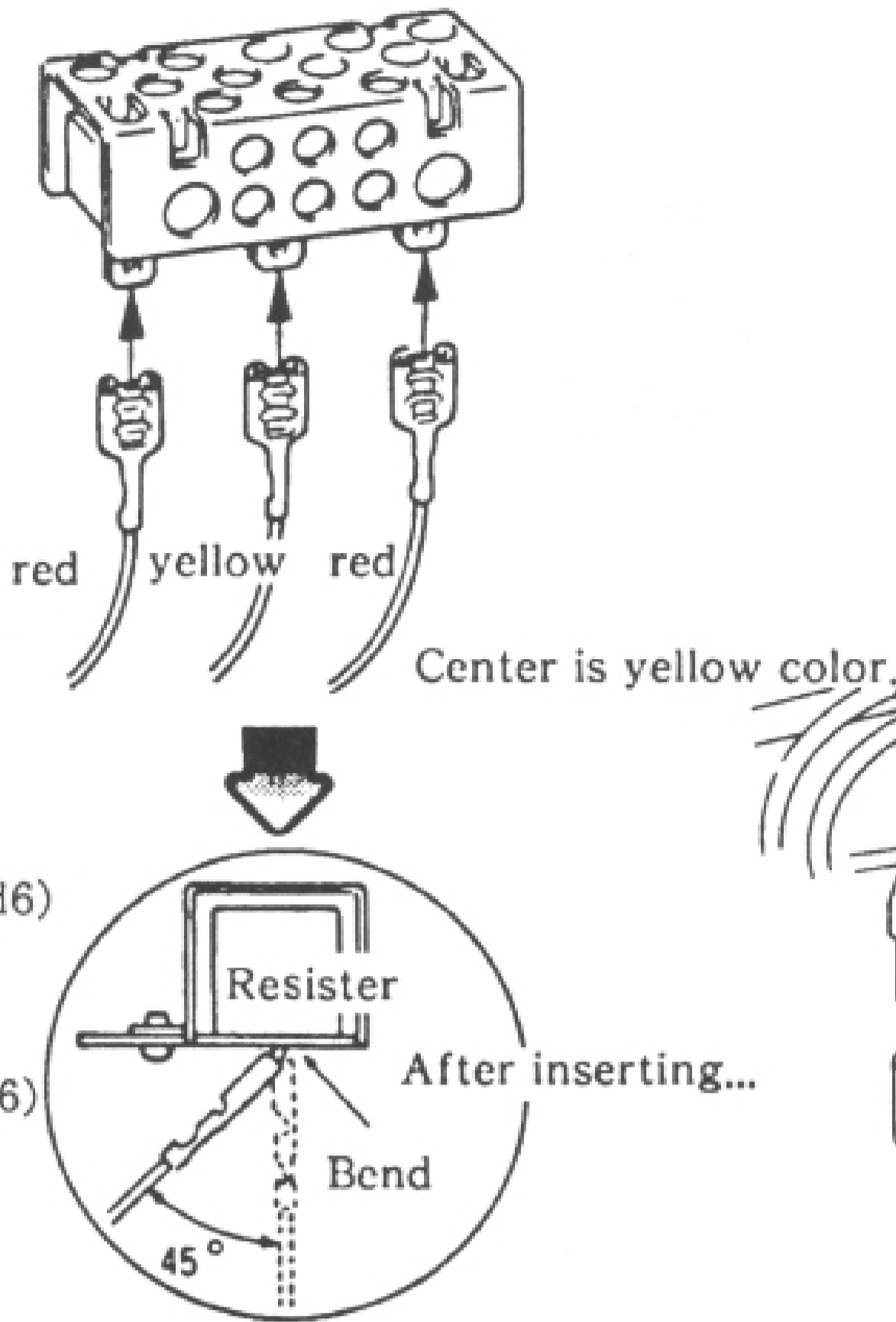
- M2×4 RH Screw..... 1
- M3×6 Bind Screw.... 2

### Step 1



### Step 2

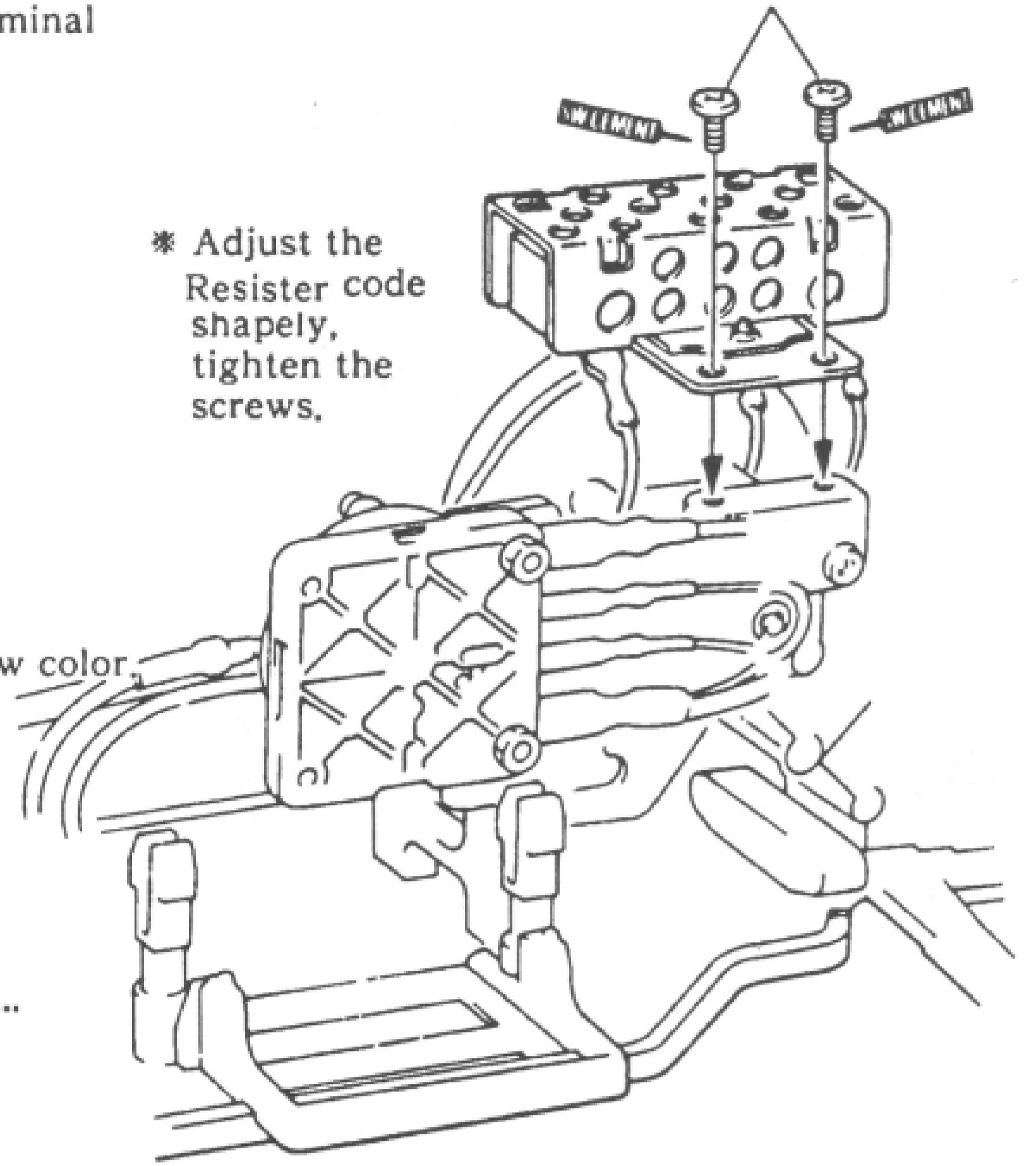
Insert the register code terminal in the controller.



### Step 3

M3×6 Bind Screw

\* Adjust the Resister code shapely, tighten the screws.

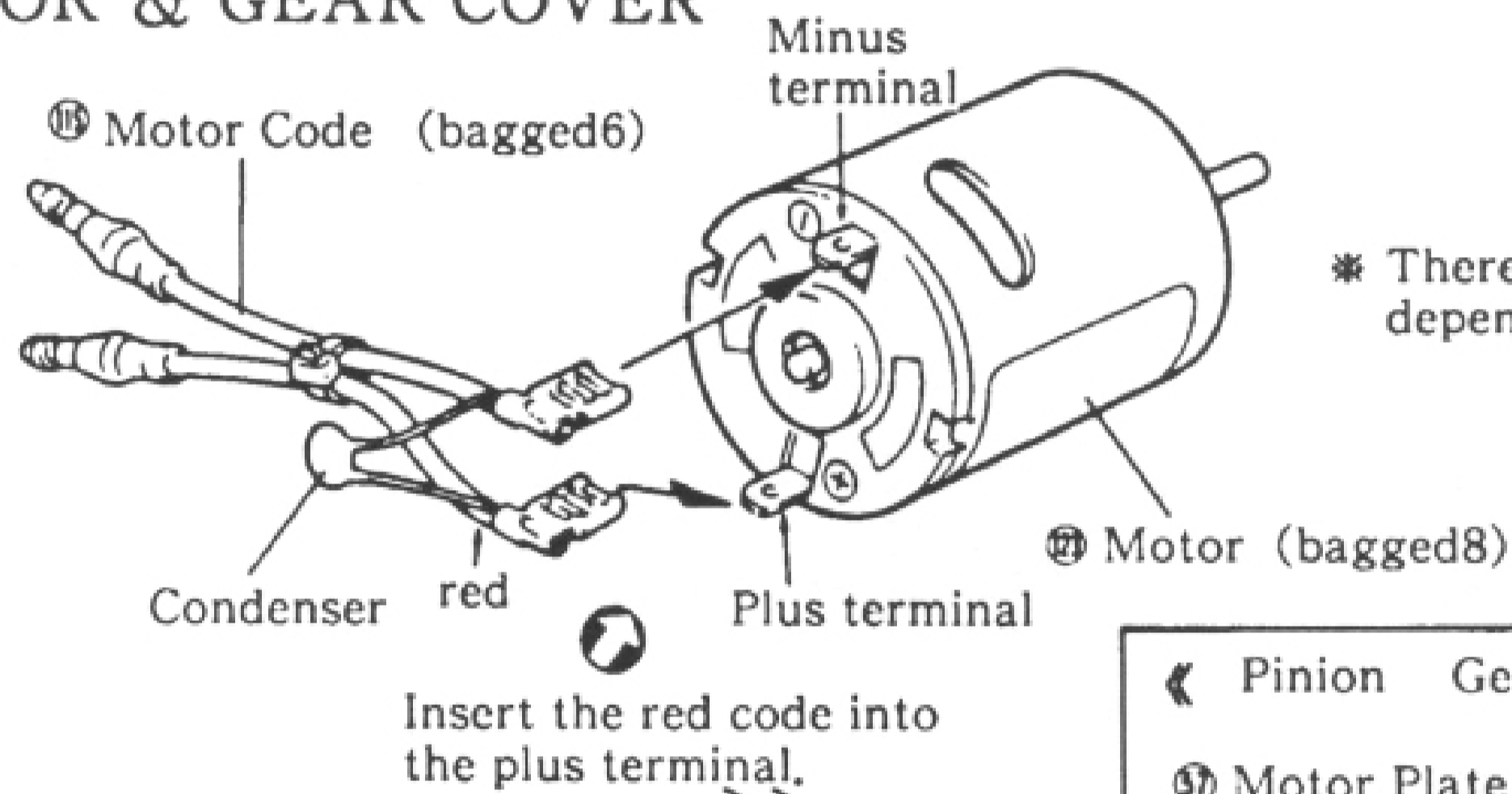


## 27 INSTALLATION OF MOTOR & GEAR COVER

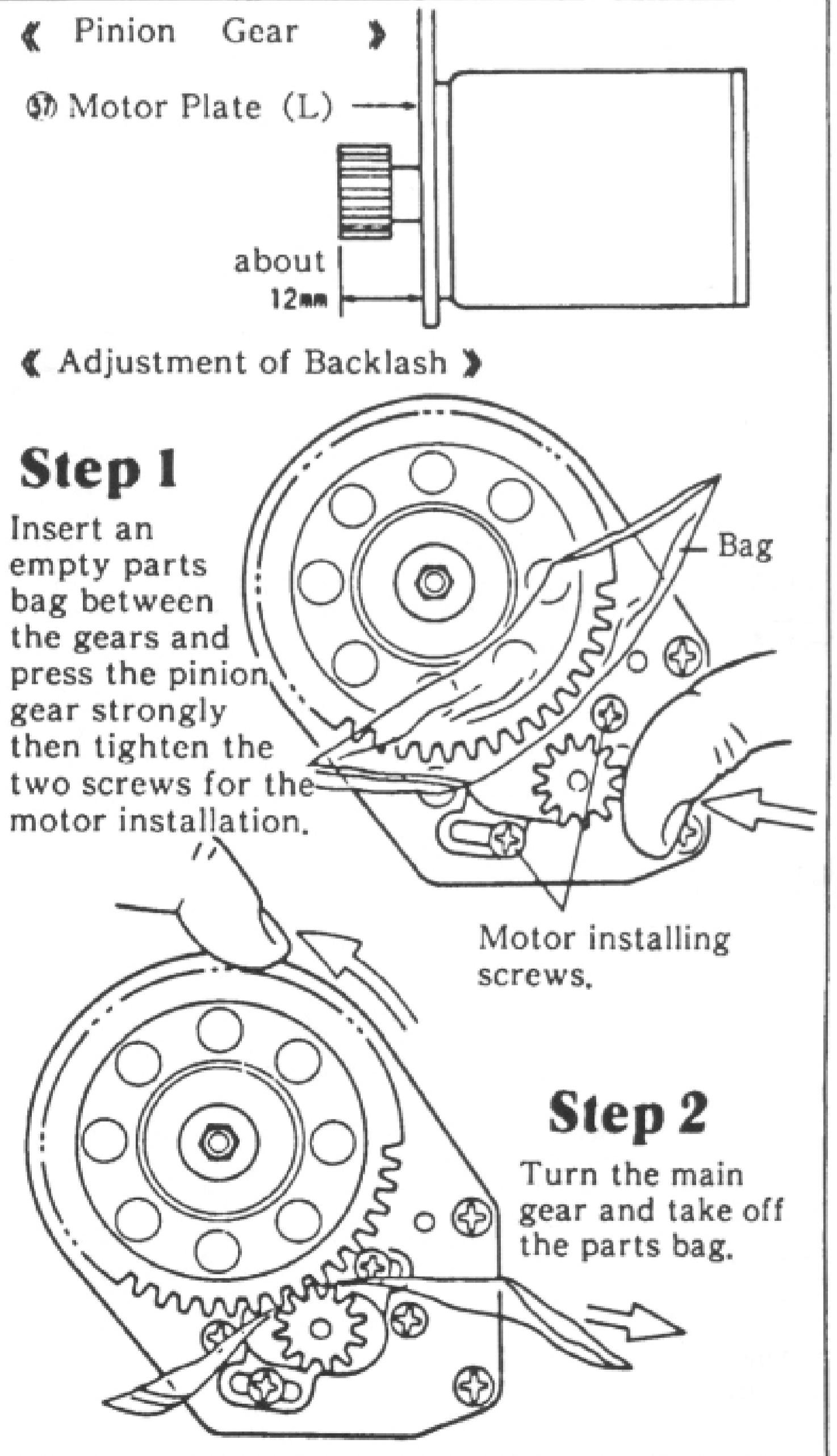
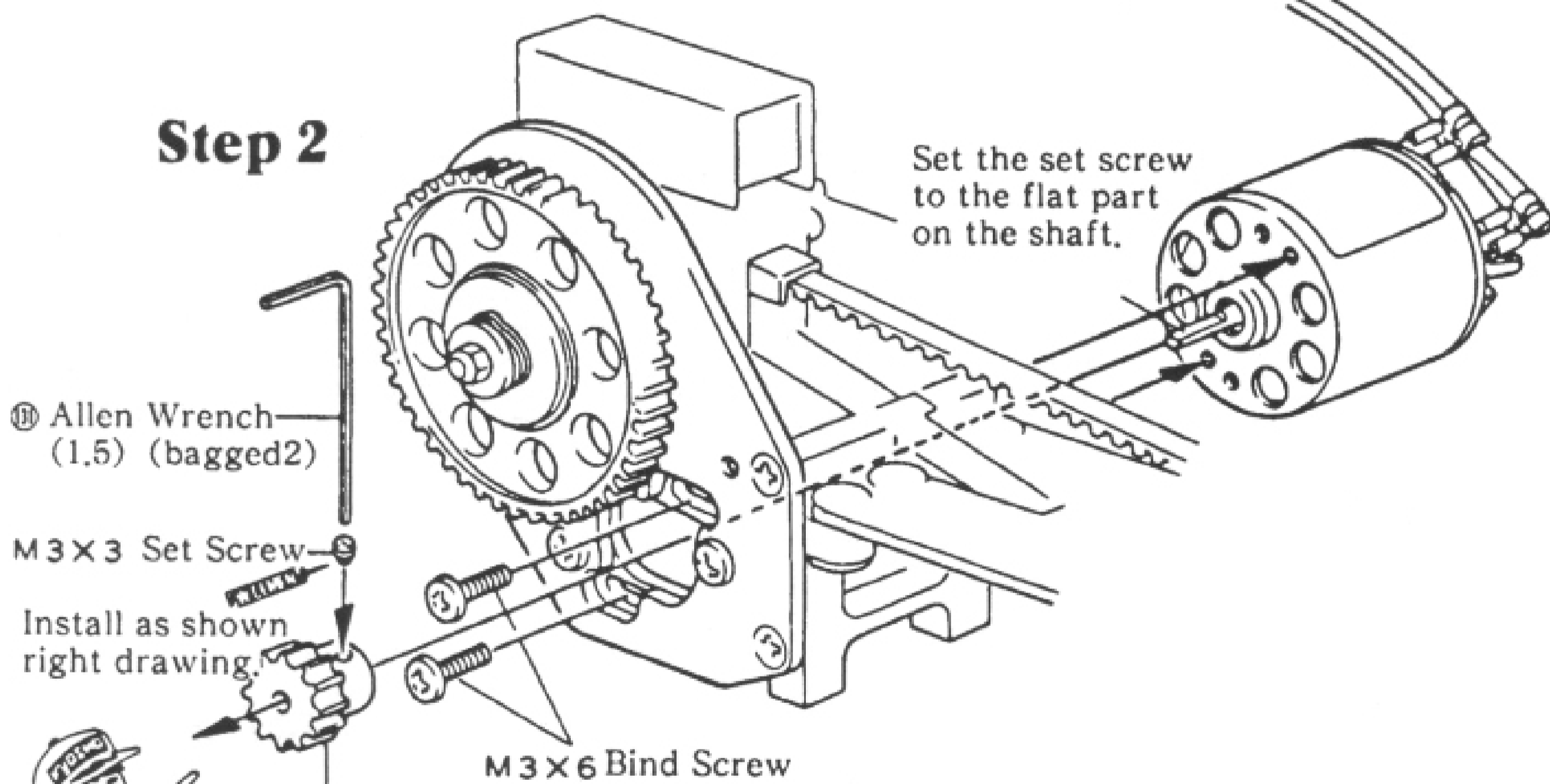
- M3×4 RH Screw..... 2
- M3×6 Bind Screw.... 2
- M3×3 Set Screw..... 1

### Step 1

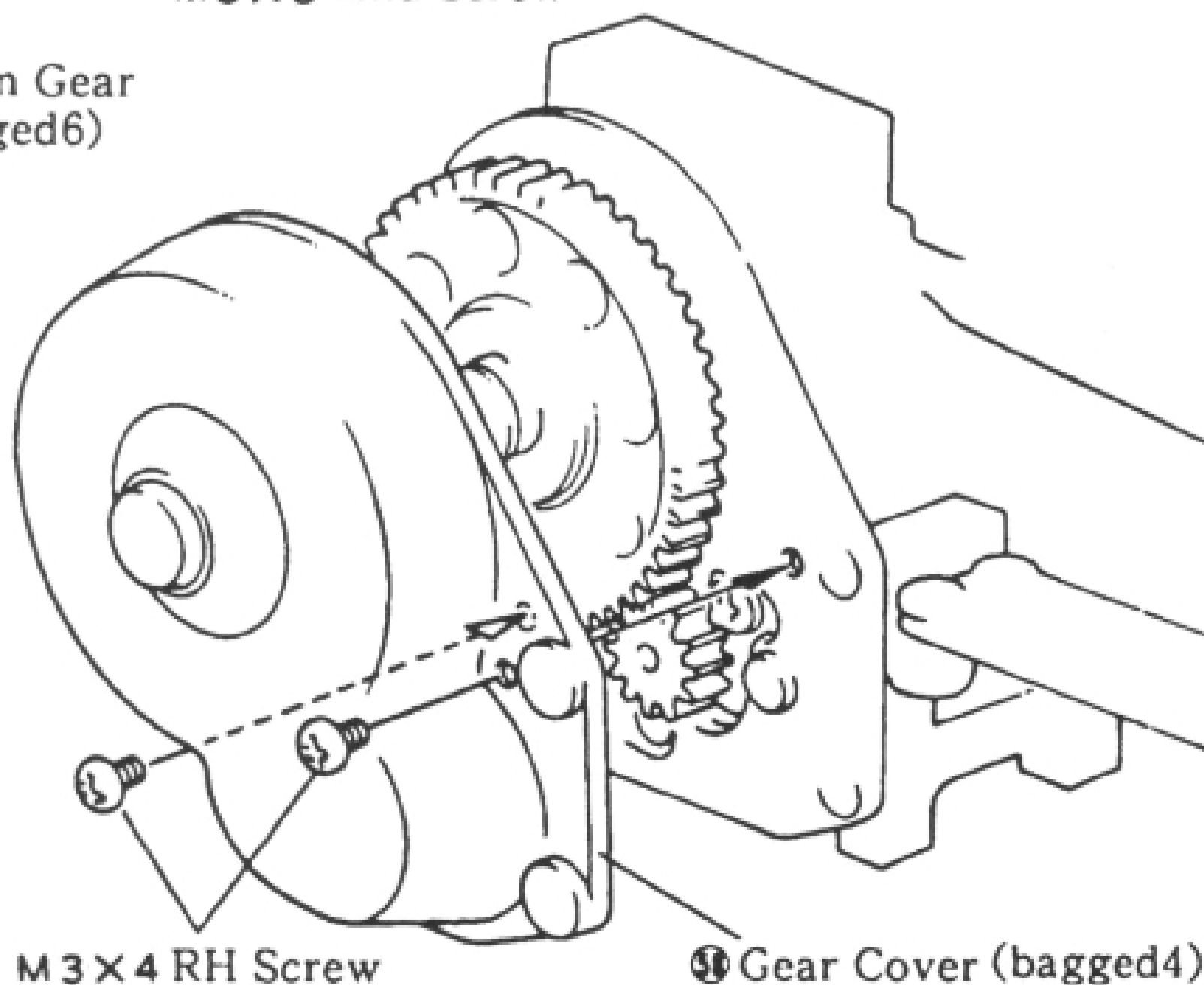
\* Be careful short the condenser!!



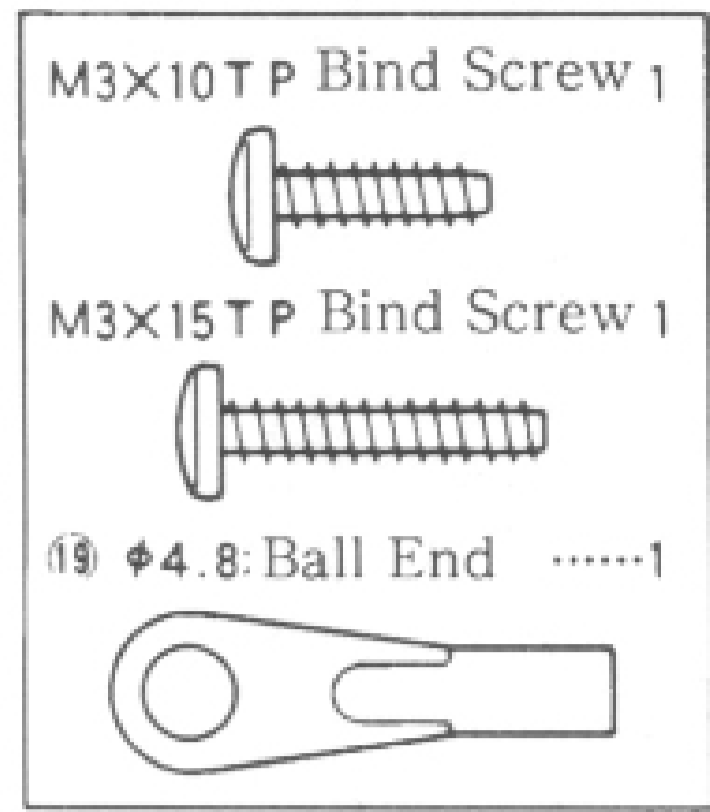
### Step 2



### Step 3

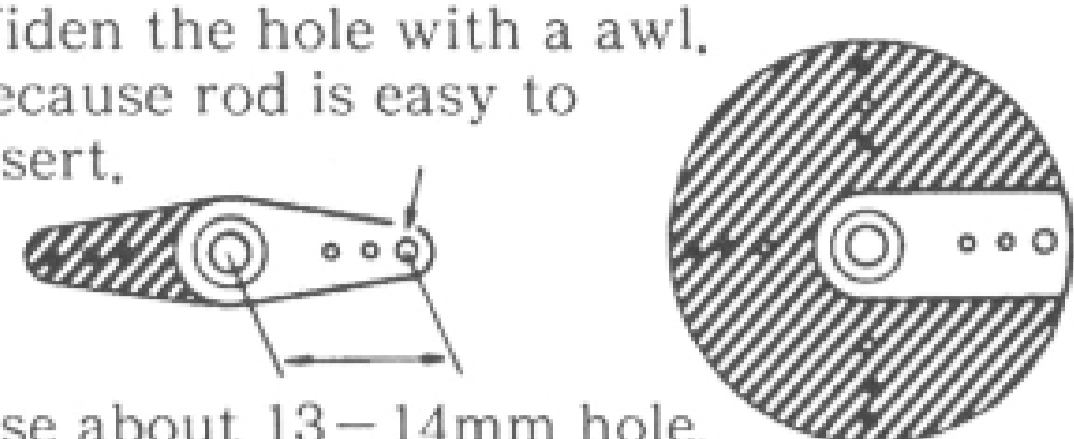


# 28 INSTALLATION OF CONTROLLER SERVO & LINKAGE



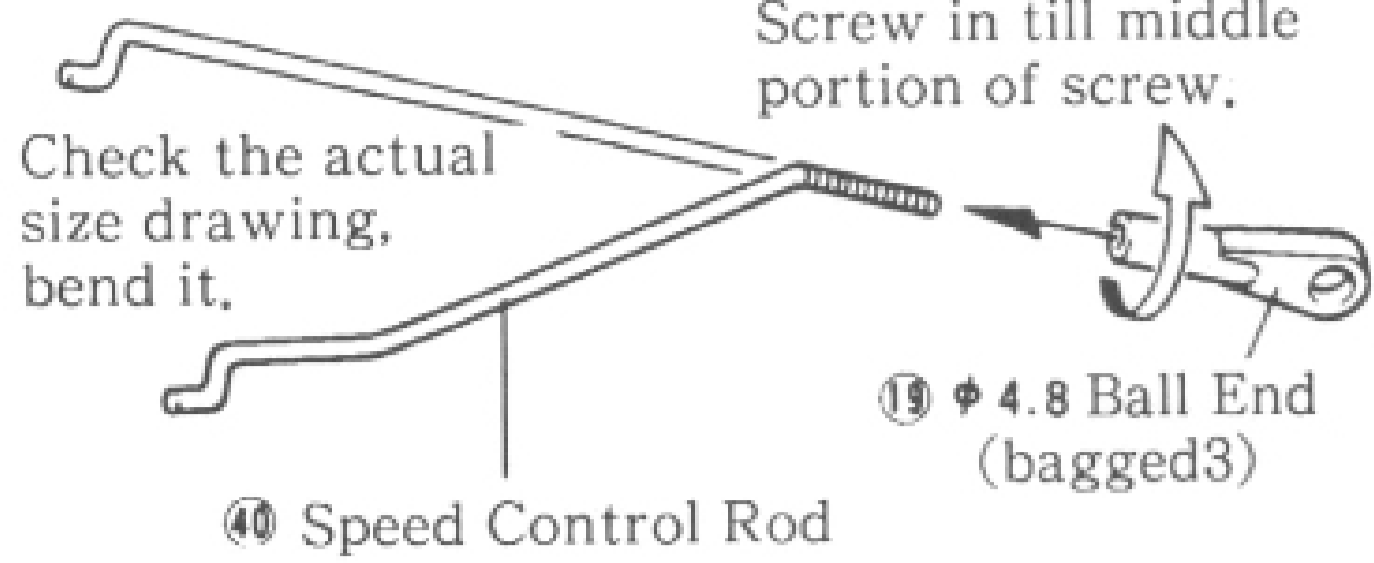
## Step 1

Cut off the shaded area of servo horn, widen the hole with an awl. Because rod is easy to insert. Use about 13-14mm hole.

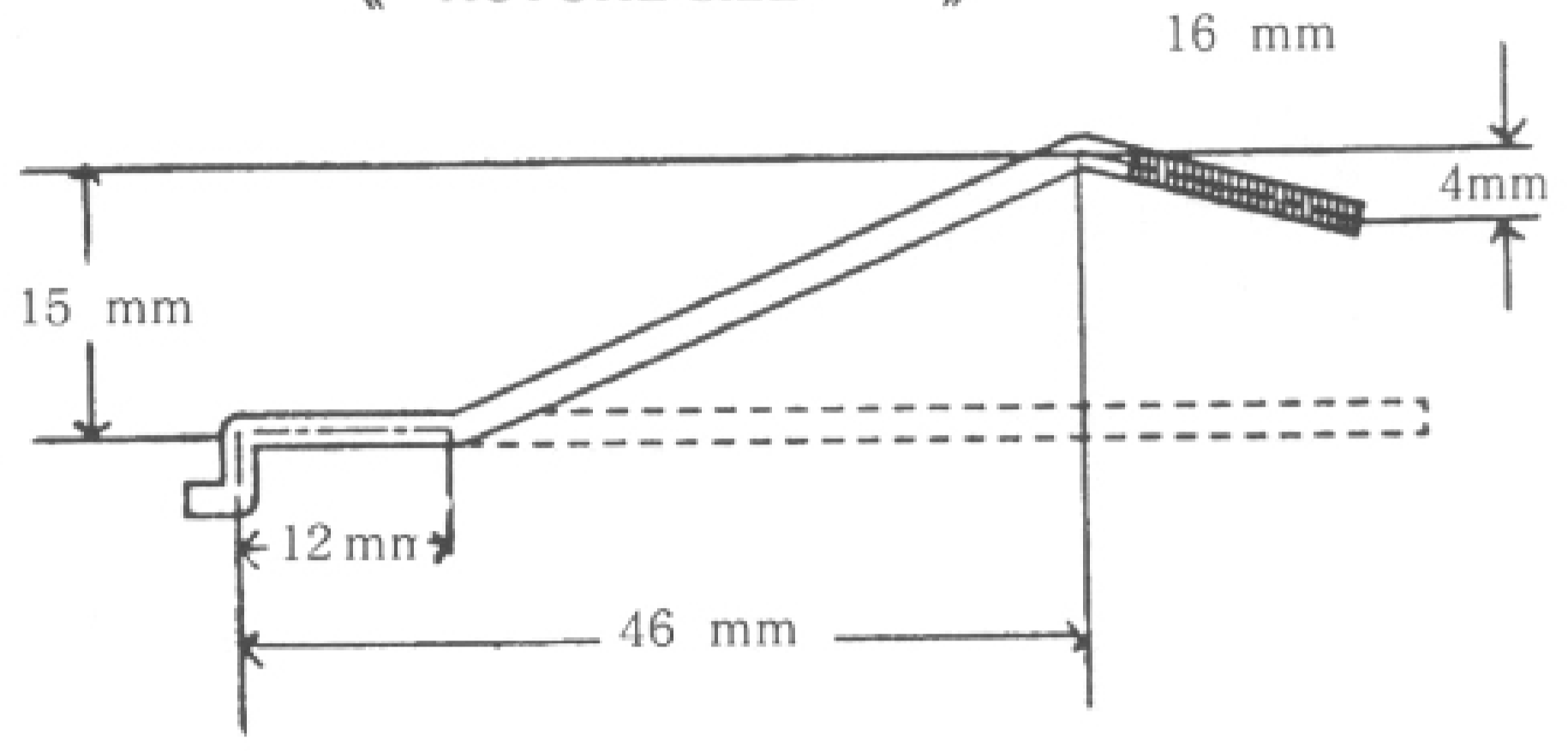


## Step 2

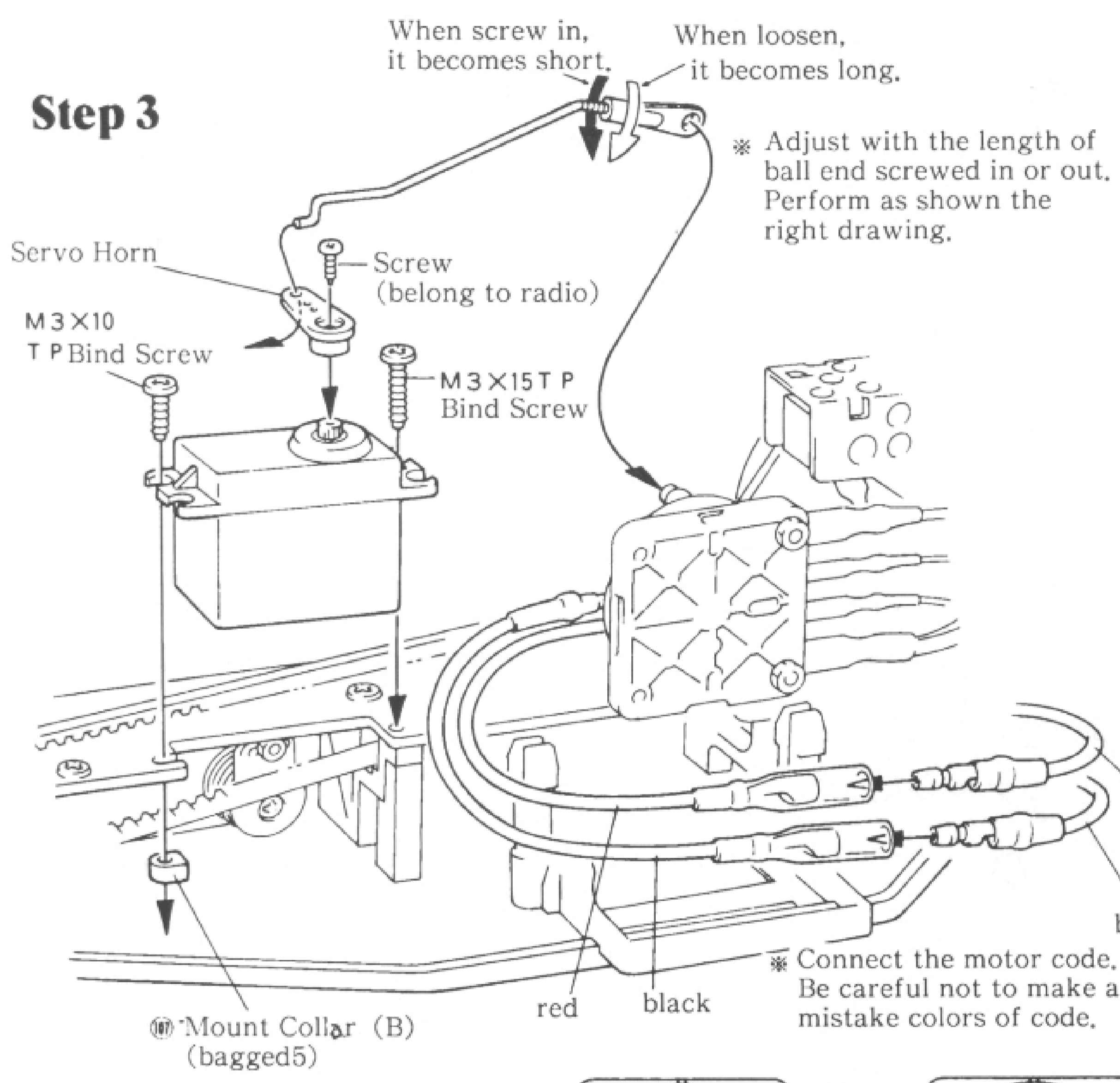
Screw in till middle portion of screw. Check the actual size drawing, bend it.



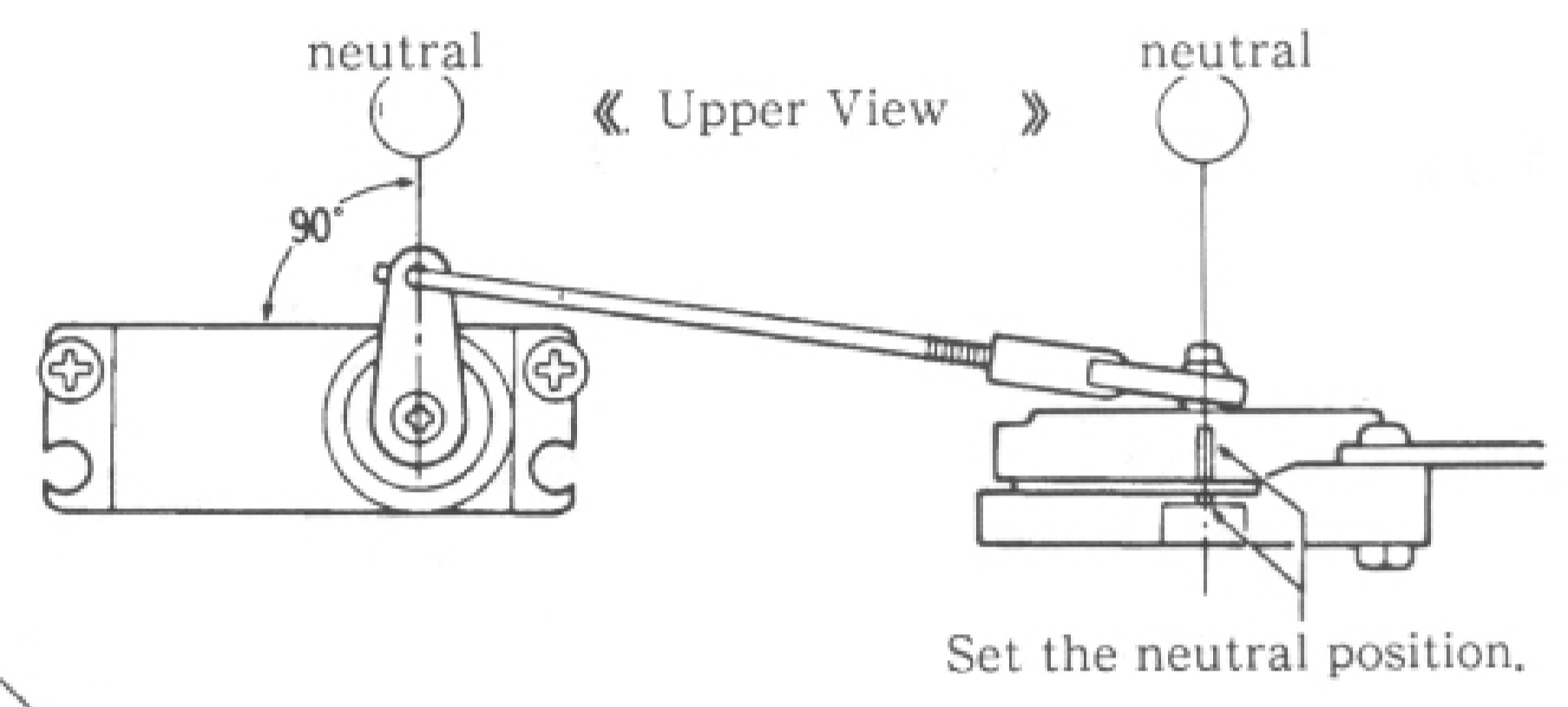
Bending the speed control rod  
« ACTUAL SIZE »



## Step 3

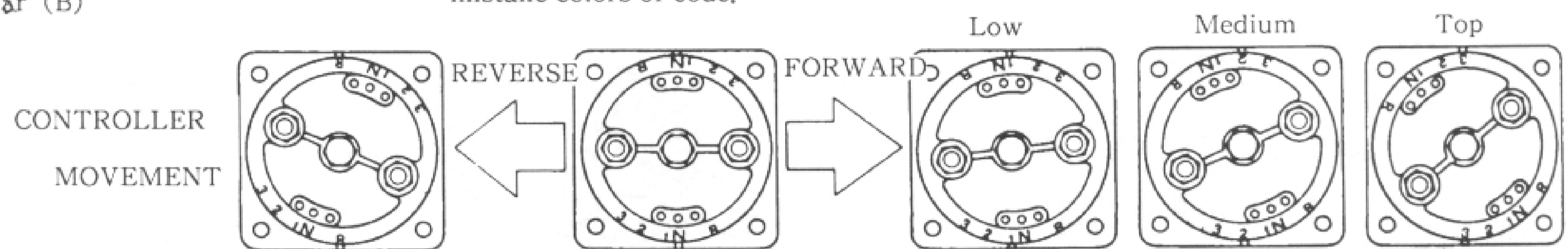


When screw in, it becomes short. When loosen, it becomes long. Adjust with the length of ball end screwed in or out. Perform as shown the right drawing.



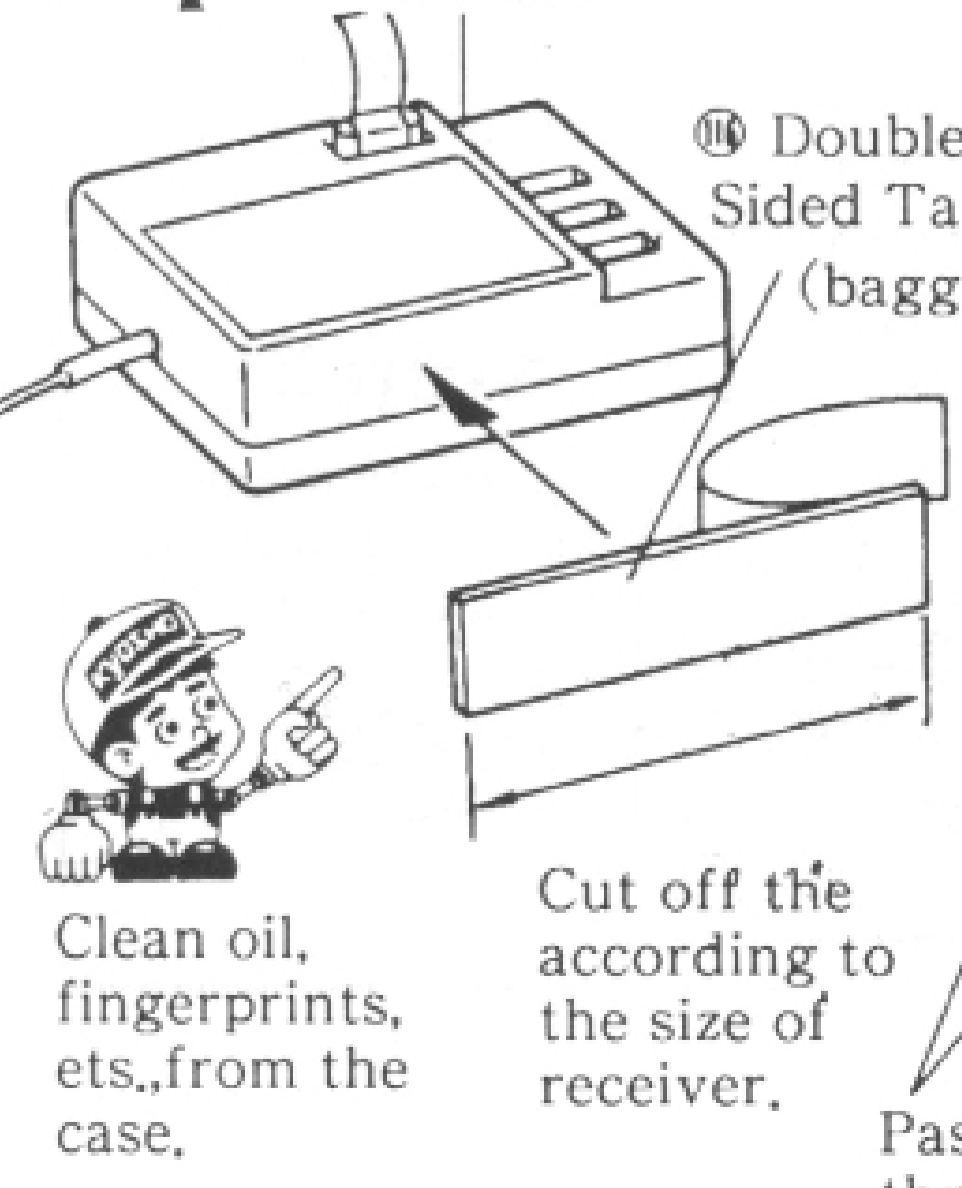
Set the neutral position.

Connect the motor code. Be careful not to make a mistake colors of code.



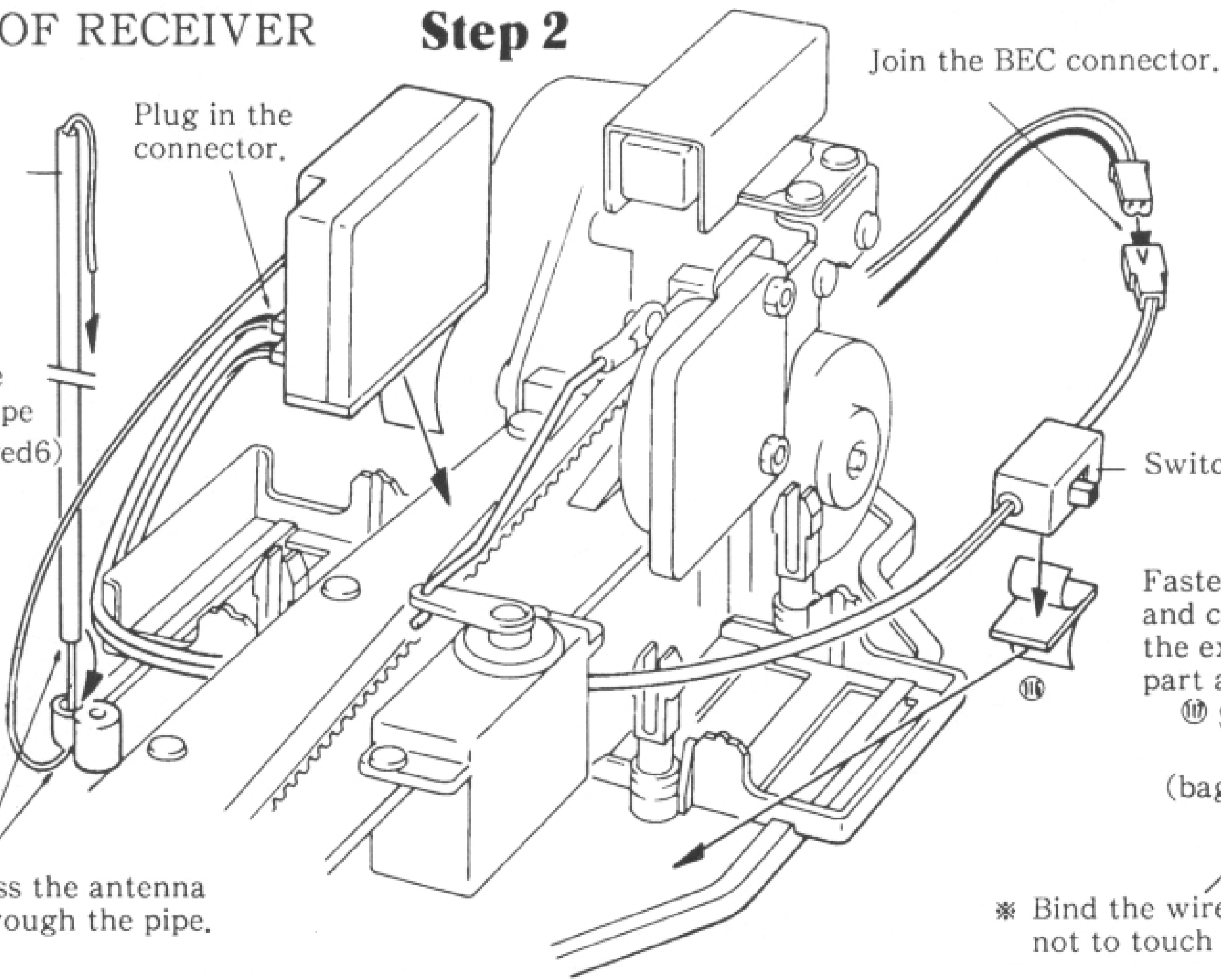
# 29 INSTALLATION OF RECEIVER

## Step 1



Cut off the according to the size of receiver.

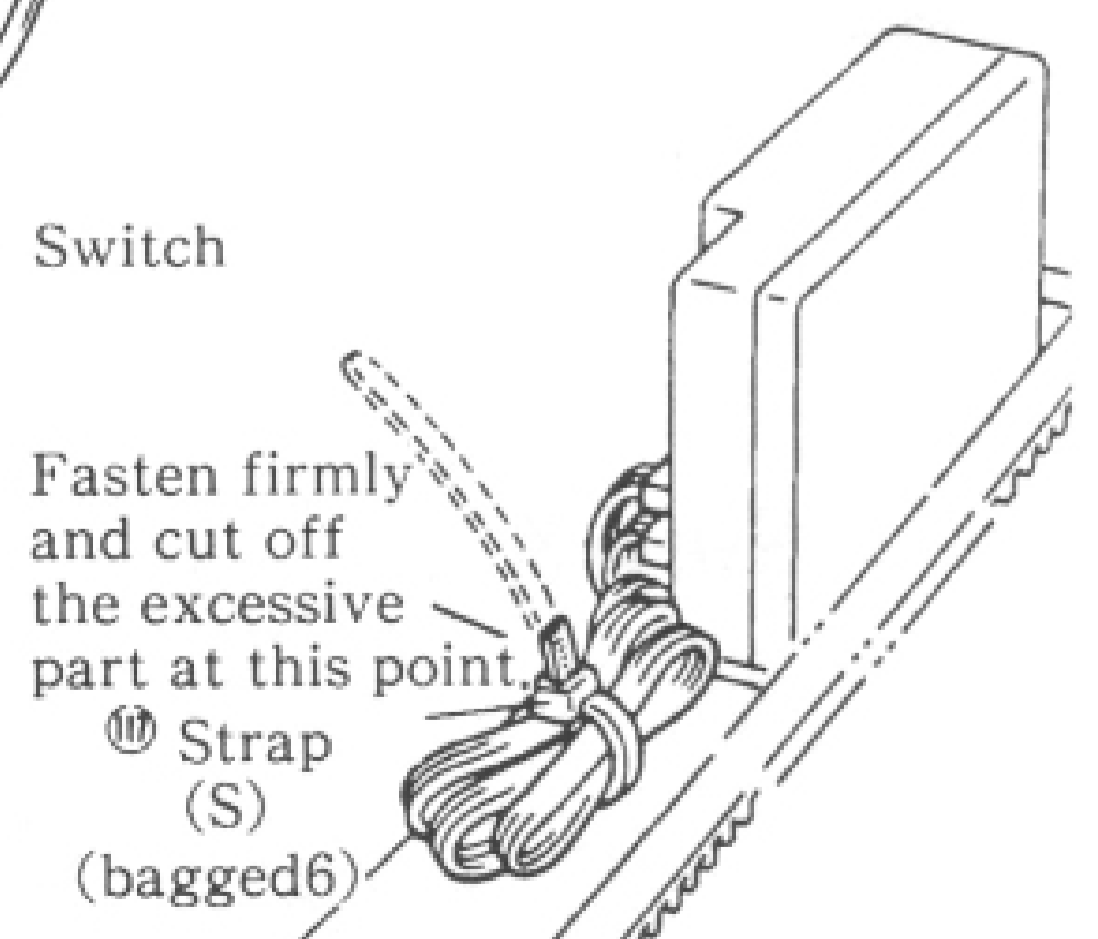
## Step 2



Join the BEC connector.

## Step 3

Bind wires with strap.



Fasten firmly and cut off the excessive part at this point. Bind the wires of RC Radio, and be careful not to touch another position and belts.

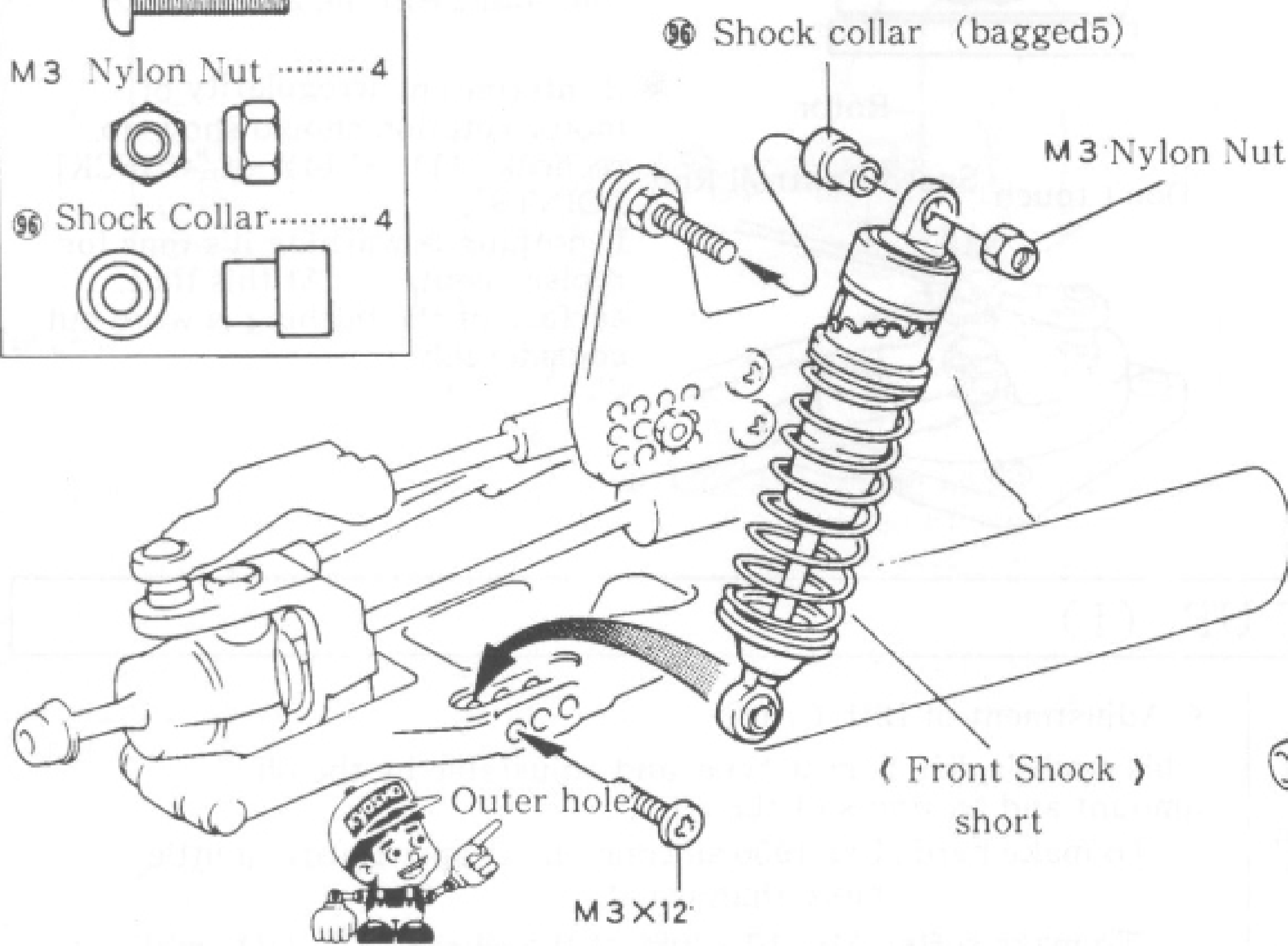


# 30 INSTALLATION OF SHOCK

- M3 X12 RH Screw ..... 4
- M3 Nylon Nut ..... 4
- Shock Collar ..... 4

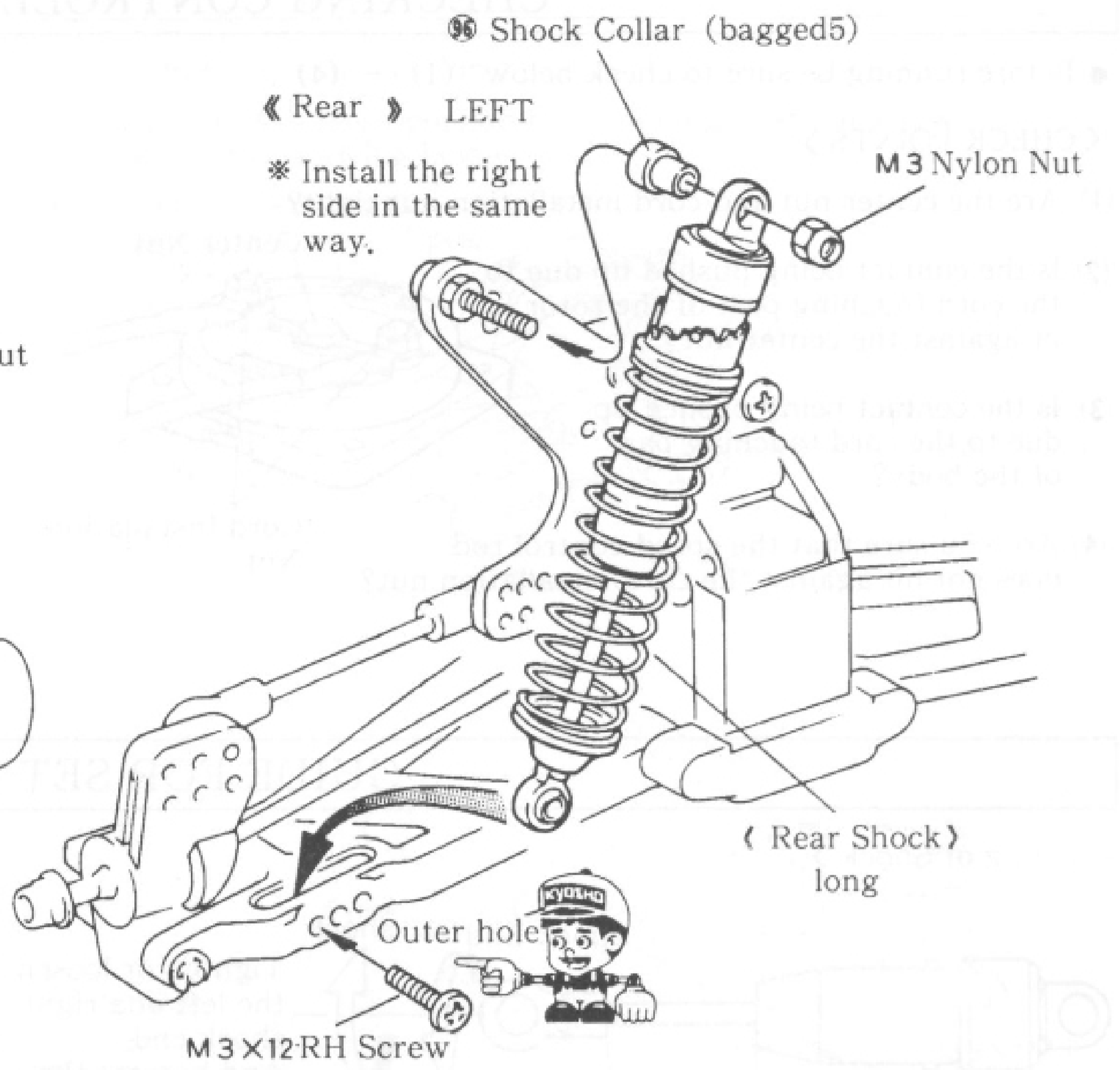
« Front » RIGHT

\* Install the left side in the same way.

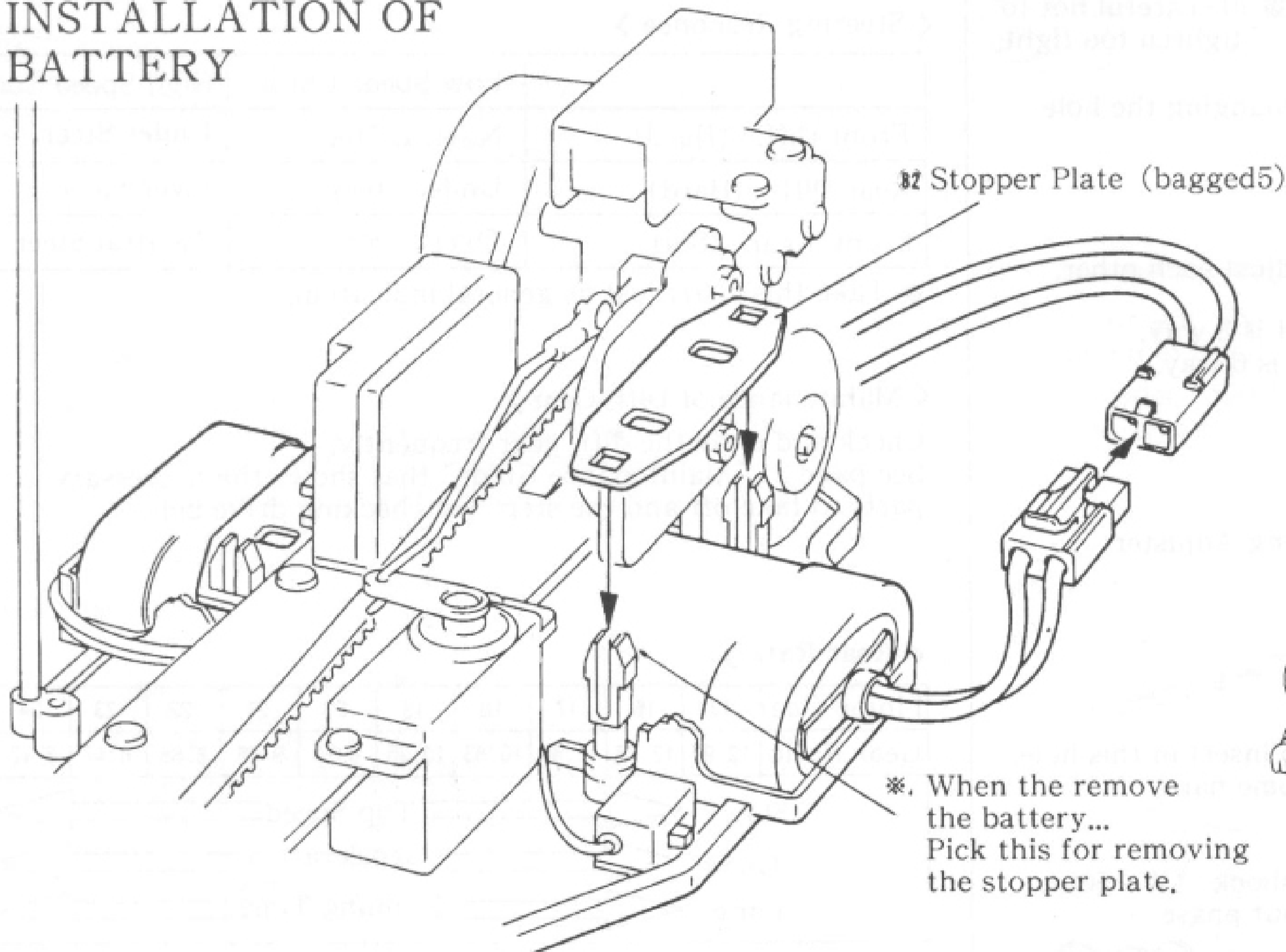


« Rear » LEFT

\* Install the right side in the same way.



# 31 INSTALLATION OF BATTERY



**KYOSHO** No. 4400

Kyosho offers the 7.2V - 1400 Power Battery which is prepared for the buggy car specially.



**CAUTION!!**

REMOVE THE NI-CD BATTERY PACK WHEN CAR IS NOT IN OPERATION OR BEING STORED.



\* Assembly of chassis portion is the end. Next do to "ANOTHER INSTRUCTION MANUAL ②"

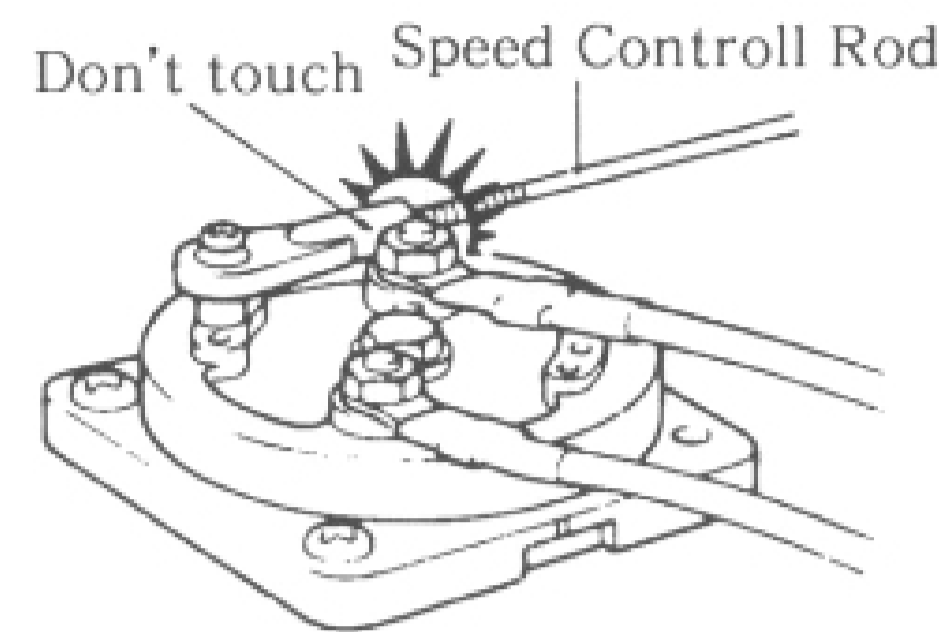
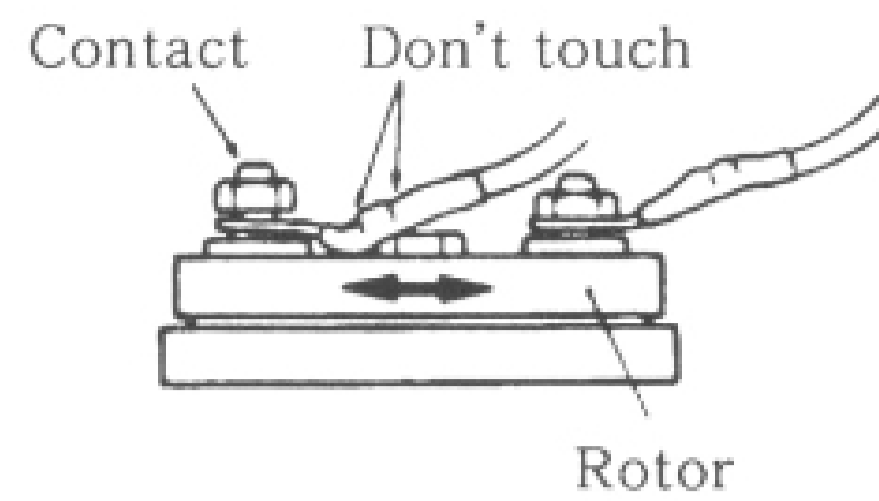
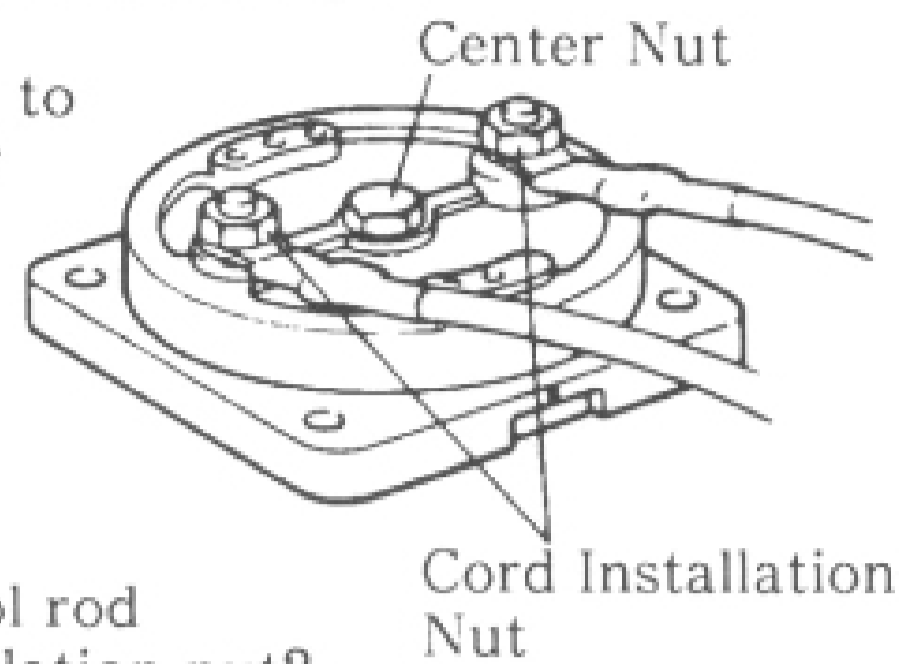
# MEMO

## CHECKING CONTROLLER & MAINTENANCE

- Before running be sure to check below (1) - (4).

### < CHECK POINTS >

- (1) Are the center nut and cord installation nut tight?
- (2) Is the contact being pushed up due to the cord touching part of the rotor or against the center nut?
- (3) Is the contact being pushed up due to the cord touching part of the body?
- (4) Are you sure that the speed control rod does not hit against the cord installation nut?



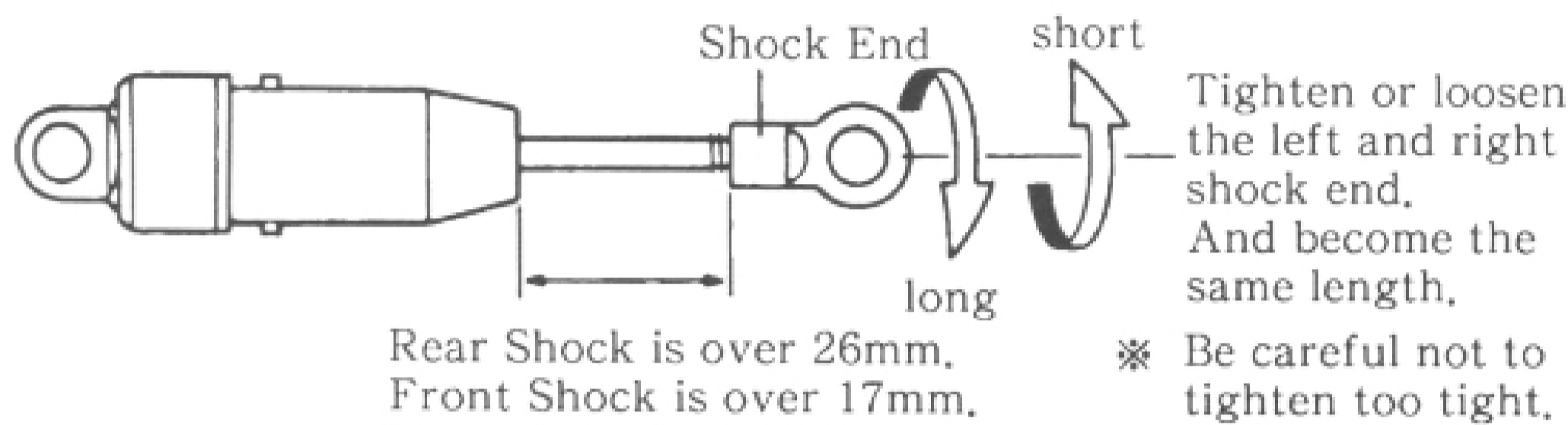
### < MAINTENANCE >

Once in a while remove the center nut and clean the inside.

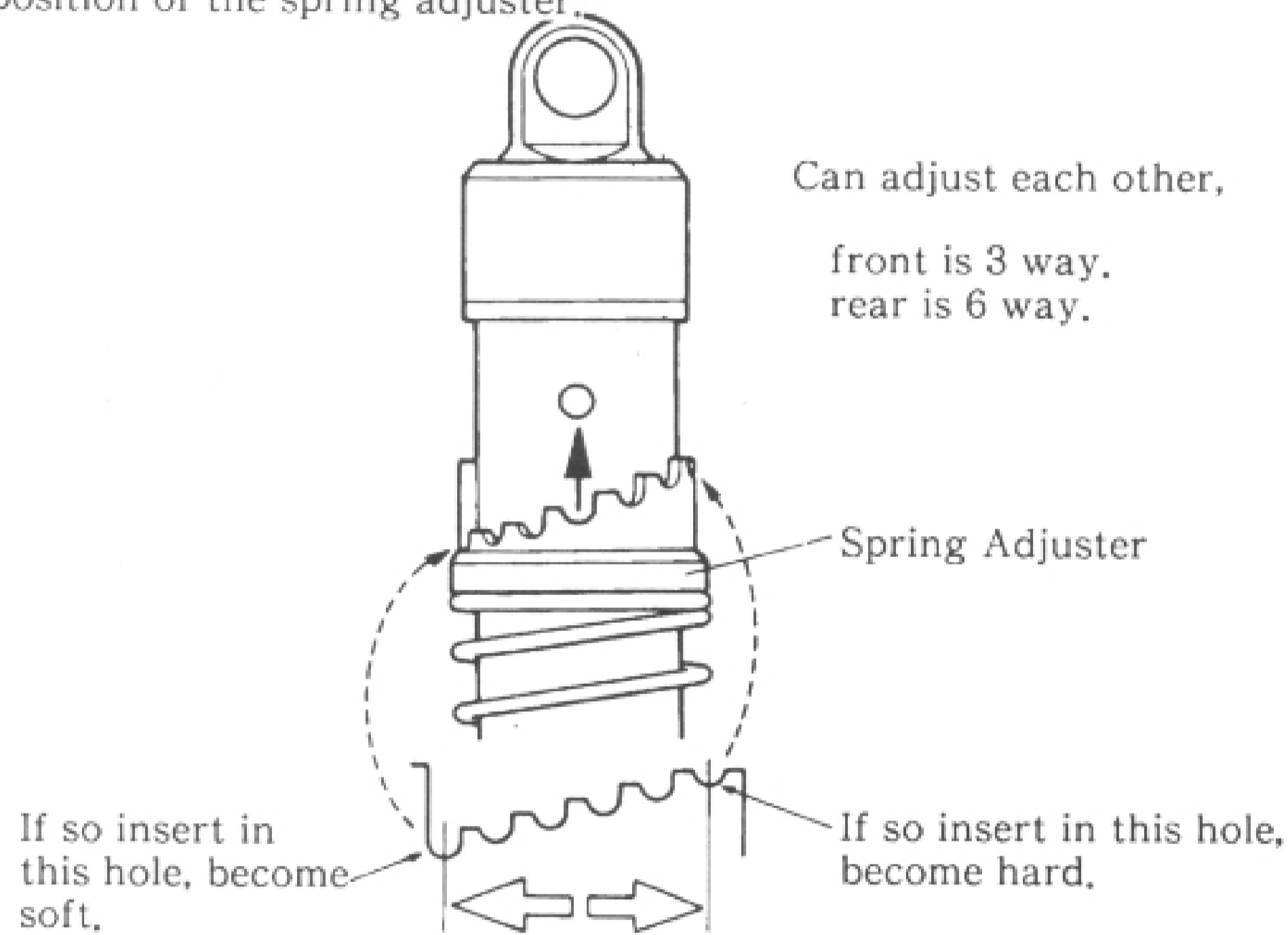
- ※ If intermittent irregularity of motor rotation should show up, recheck (1) - (4) of "CHECK POINTS". If nothing is warning it's time for replacement. (At this time, surface of the bushing is worn out considerably.)

## GUIDE FOR SET UP (1)

### < Setting of Shock >

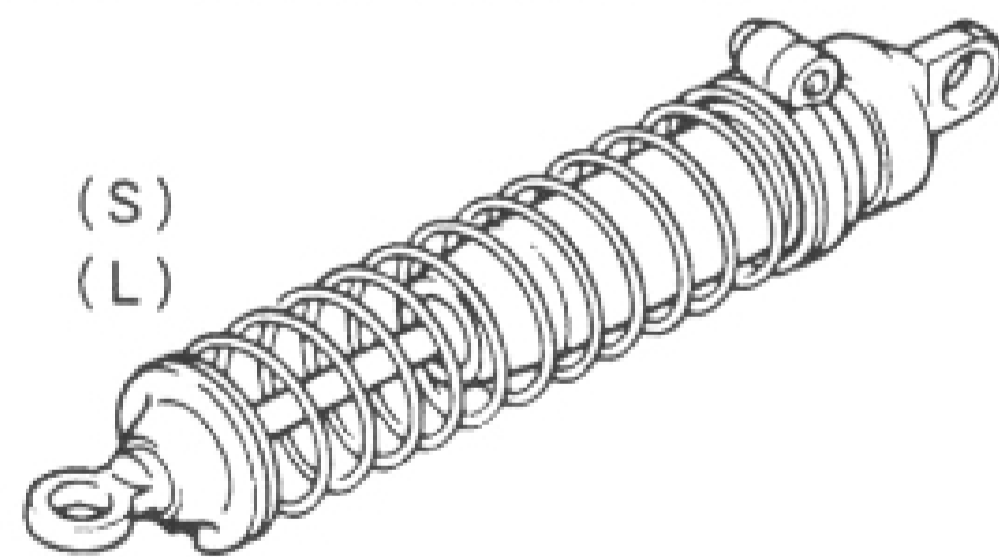


- Spring tension can be adjusted by high simply changing the hole position of the spring adjuster.



- Until use the optional high precision pressure shock (W-5001, W-5002) spring tension can be adjusted without phase.

W-5001 Pressure Shock (S)  
W-5002 Pressure Shock (L)



### < Adjustment of Hardness of Shock Action >

	← harder → softer →			
No 1951 Shock Oil (S·M·H)	Yellow	Green	Red	
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		

### < MAINTENANCE OF OIL SHOCK >

By changing the oil shock periodically, can maintain fixed effectiveness. When changing oil remove the dirty oil thoroughly from inside the shock and fill with oil.

### < Adjustment of Diff. Gear >

This model's diff. is gear type, and adjustable by the oil amount and hardness of the oil.

To make hard...Use 1956 silicone oil (Super Hard) a little more than usual.

To make softer...Mix 10-20% of the silicone oil (H) with diff. oil.

### < Steering Responce >

	Low Speed Corner	High Speed Corner
Front Diff. (Hard)	Neutral Steer	Under Steer
Rear Diff. (Hard)	Under Steer	Over Steer
Front, Rear (Soft)	Over Steer	Neutral Steer

※ Take this chart just as general indication.

### < Maintenance of Diff. Gear >

Check and clear the diff. gear frequently. See page 21 "Maintenance Guide" that shows the necessary parts to take off and the steps for checking drive belt.

### < Rear Ratio >

Pinion Gear	15	16	17	18	19	20	21	22	23	24	25
Gear Ratio	12.99	12.18	11.46	10.83	10.26	9.74	9.28	8.86	8.47	8.12	7.79
Slow	← Top Speed → Fast										
Good	← Acceleration → Not Good										
Long	← Running Time → Short										

### < Ball Diff. >... Option

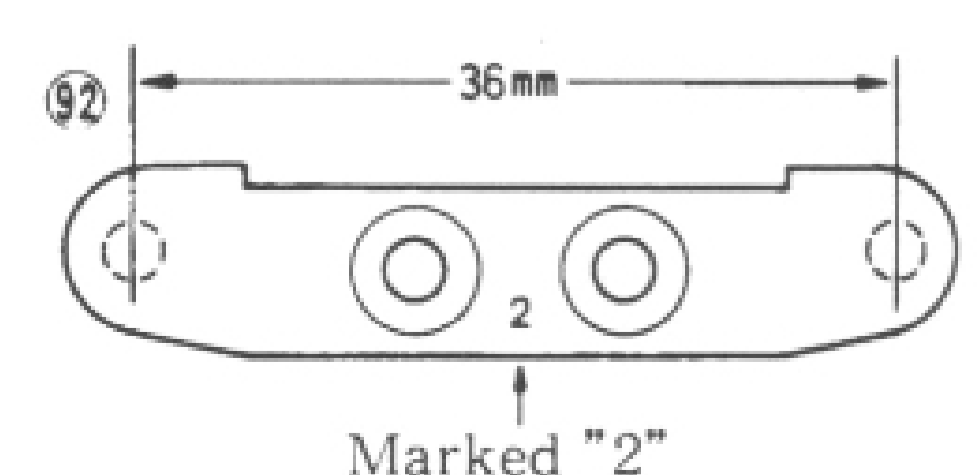
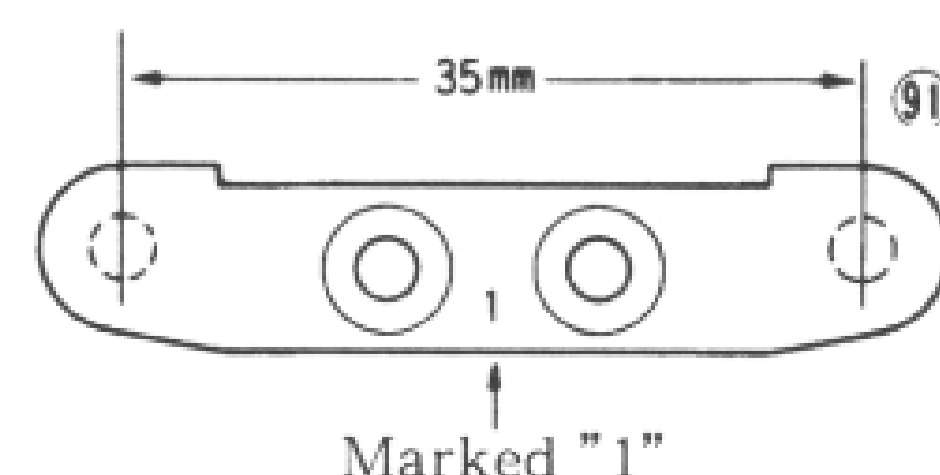
Possible to install ball differential for front and rear. Use ball diff. pulley, Ball diff. flange in (bagged4) with option parts WBD-1 Ball diff. shaft plate set and WBD-2 Ball diff. ball set together. Each combination set is required for front and rear installation. When use the grease to the ball diff., it is better to use the 1877 ball diff. grease.

### < Adjustment of Rear Toe In >

Toe in angle is adjustable by changing the part ⑨① (marked "1") and ⑨② (marked "2"). In this manual part ⑨② is used. For more toe in angle use part ⑨①

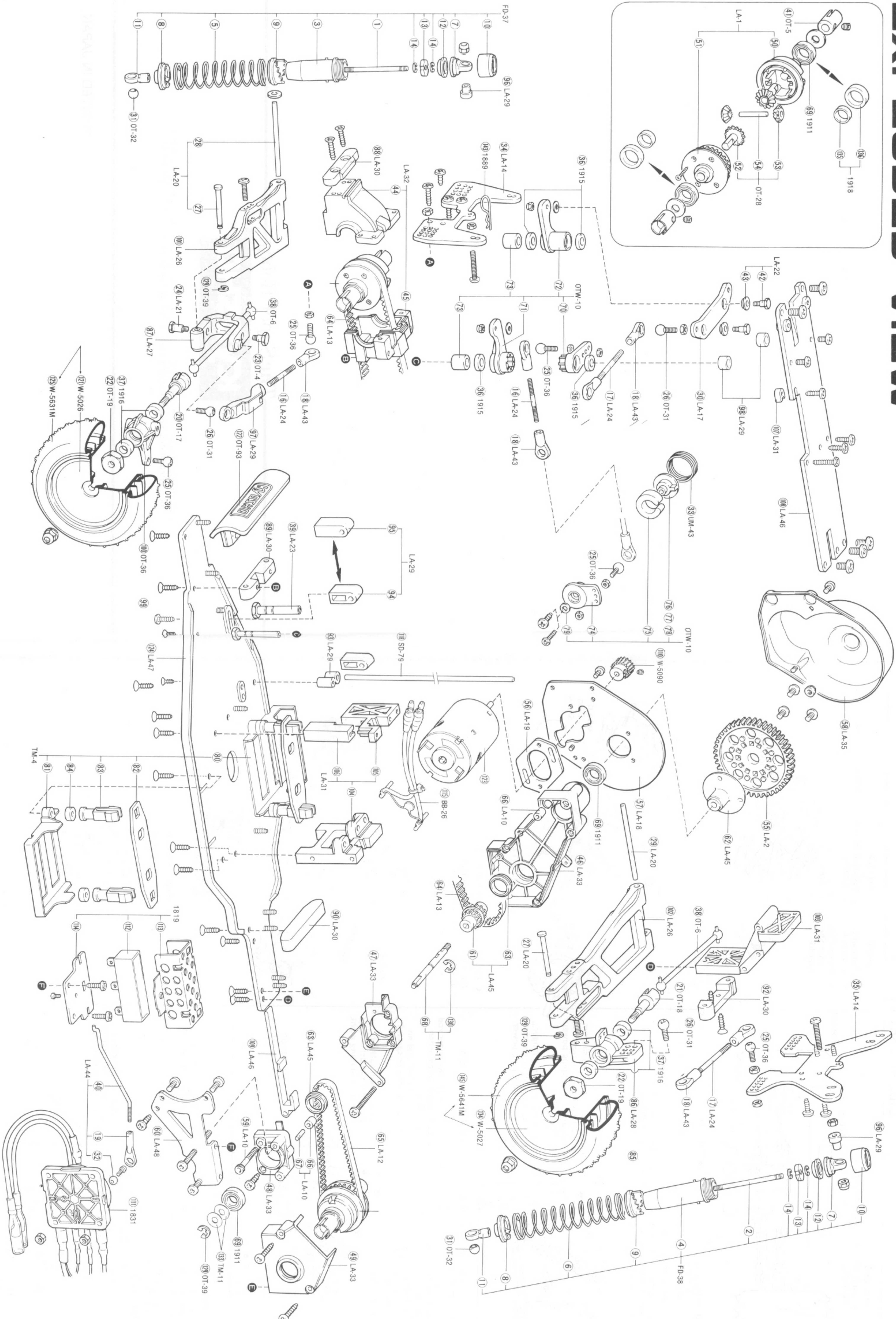
⑨① ...Grip Running

⑨② ...Slide Running





# EXPLODED VIEW



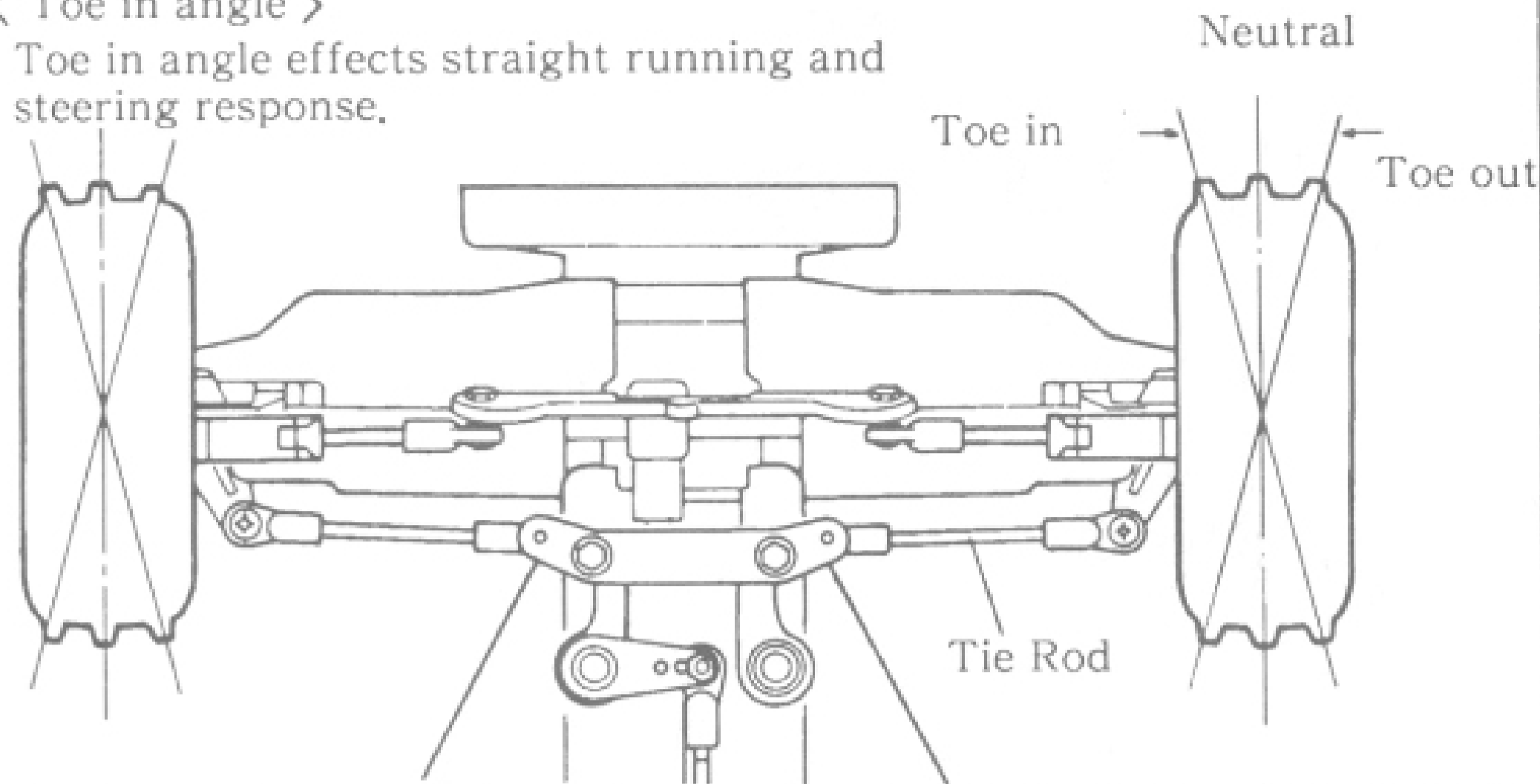
MAGICAL M-03



## GUIDE FOR SET UP (2)

### < Toe in angle >

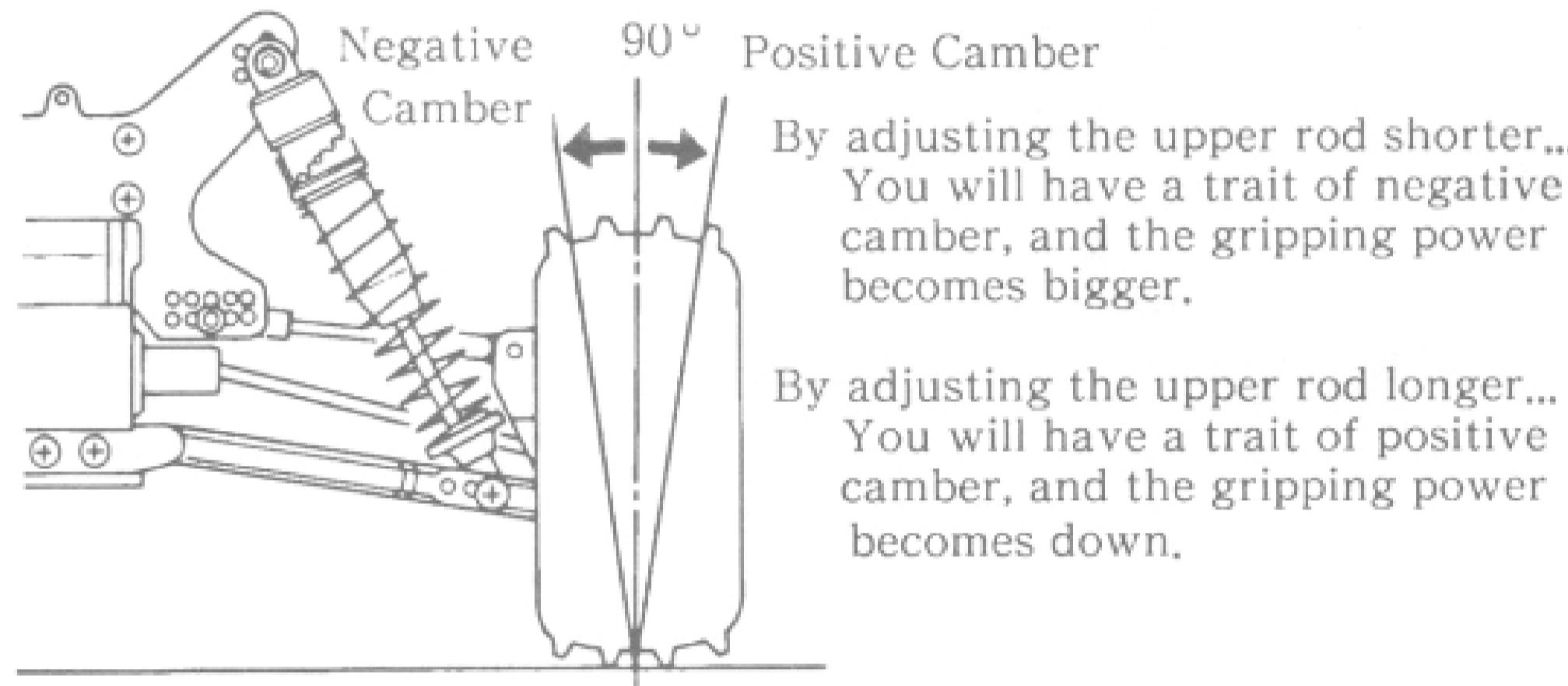
Toe in angle effects straight running and steering response.



- Make the length of tie rod longer ... Become toe in. Slower steering response.
- Make the length of tie rod shorter ... Becomes toe out. Quick steering response.

### < Basic Setting >

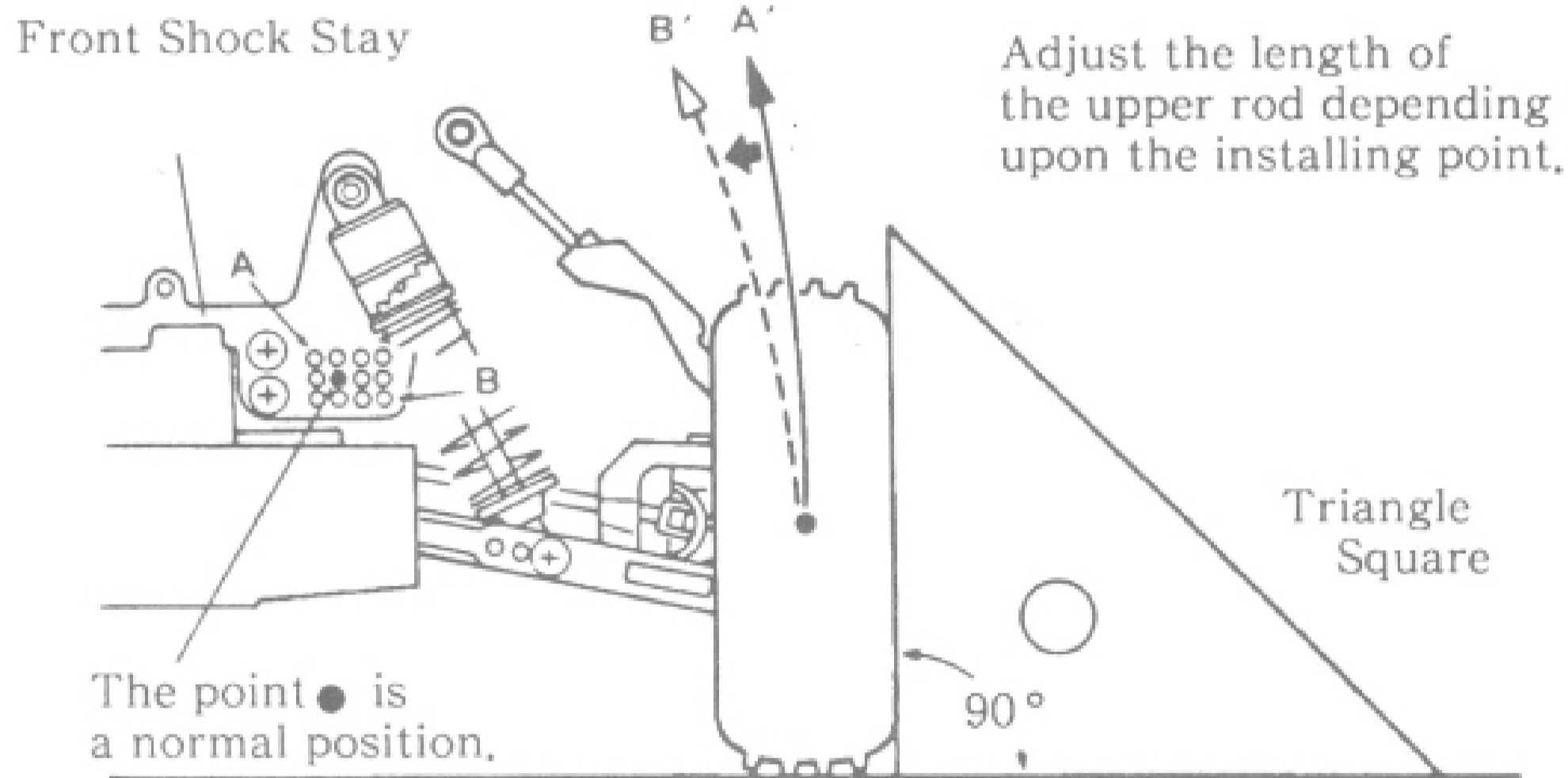
Place the model car on a flat surface, and keep the car with the maximum body, and adjust length of the front and rear upper rods so that the wheels stand at angle of 90° to the ground.



### < Correlation between installing position of the front upper rod > and camber angle.

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

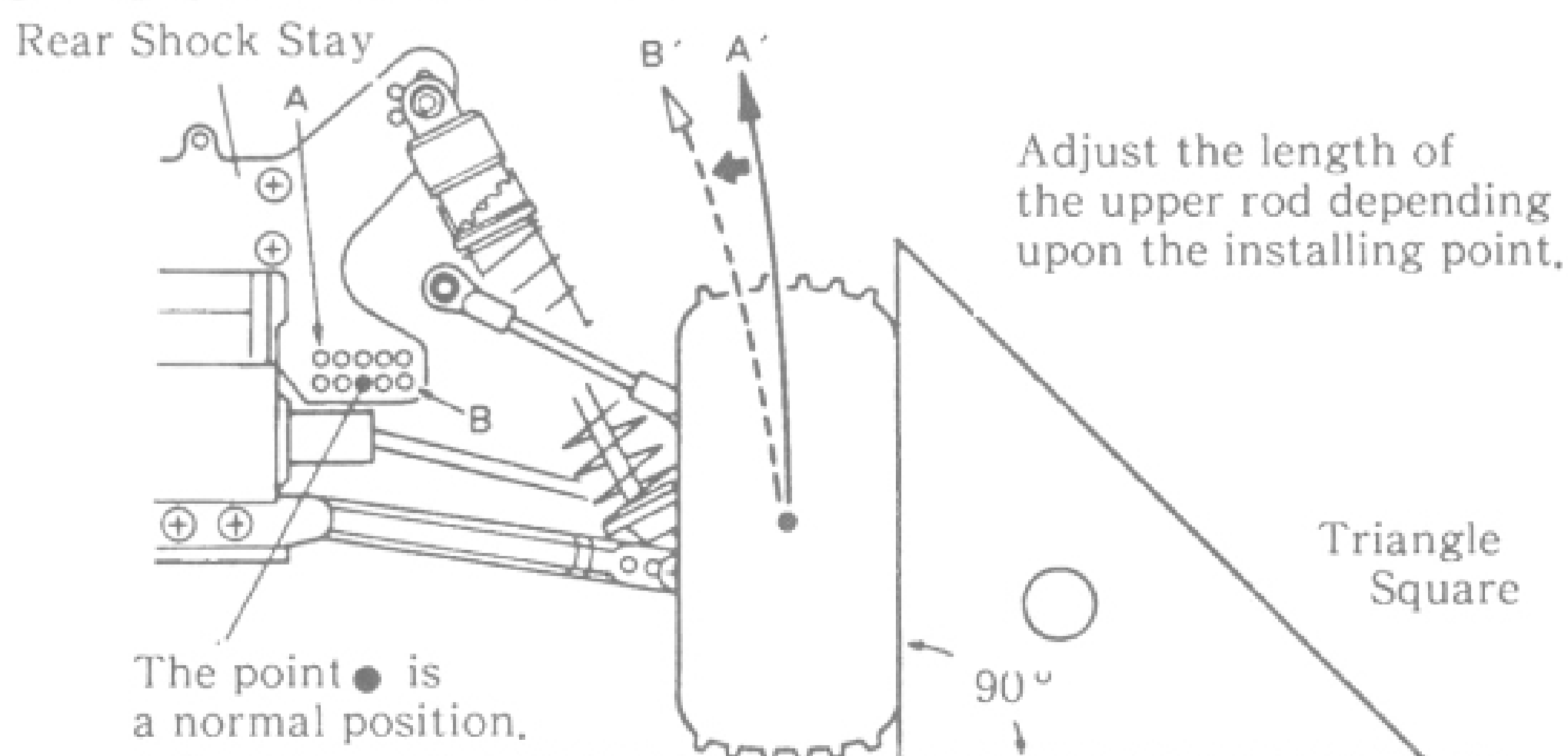
As a standard, on course with bad grips it is set close to "A" and on good grip course, close to "B". When close to "B" setting be careful as there are cases of "Take-in".



### < Correlation between installing position of the rear upper rod > and camber angle.

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

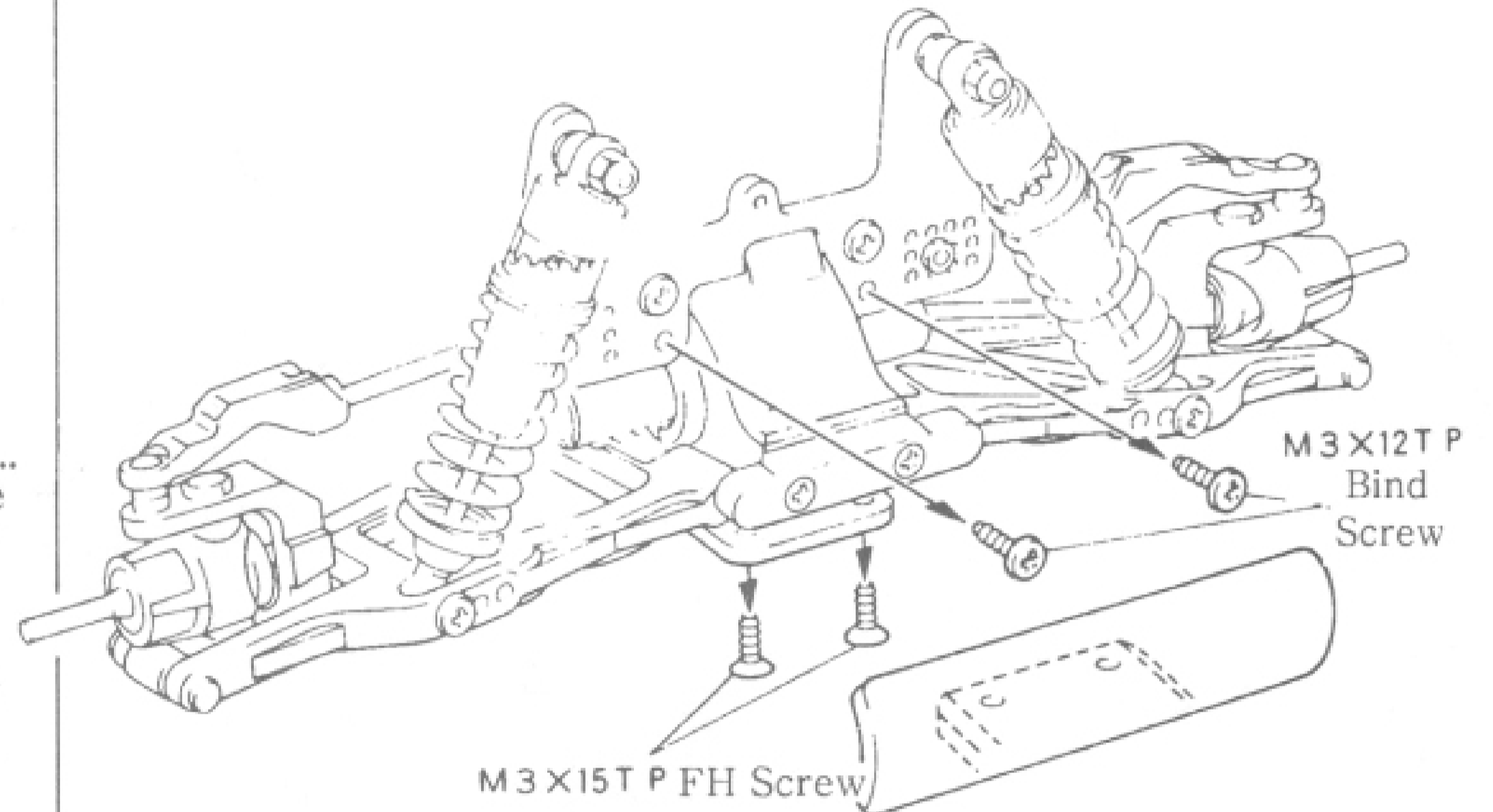
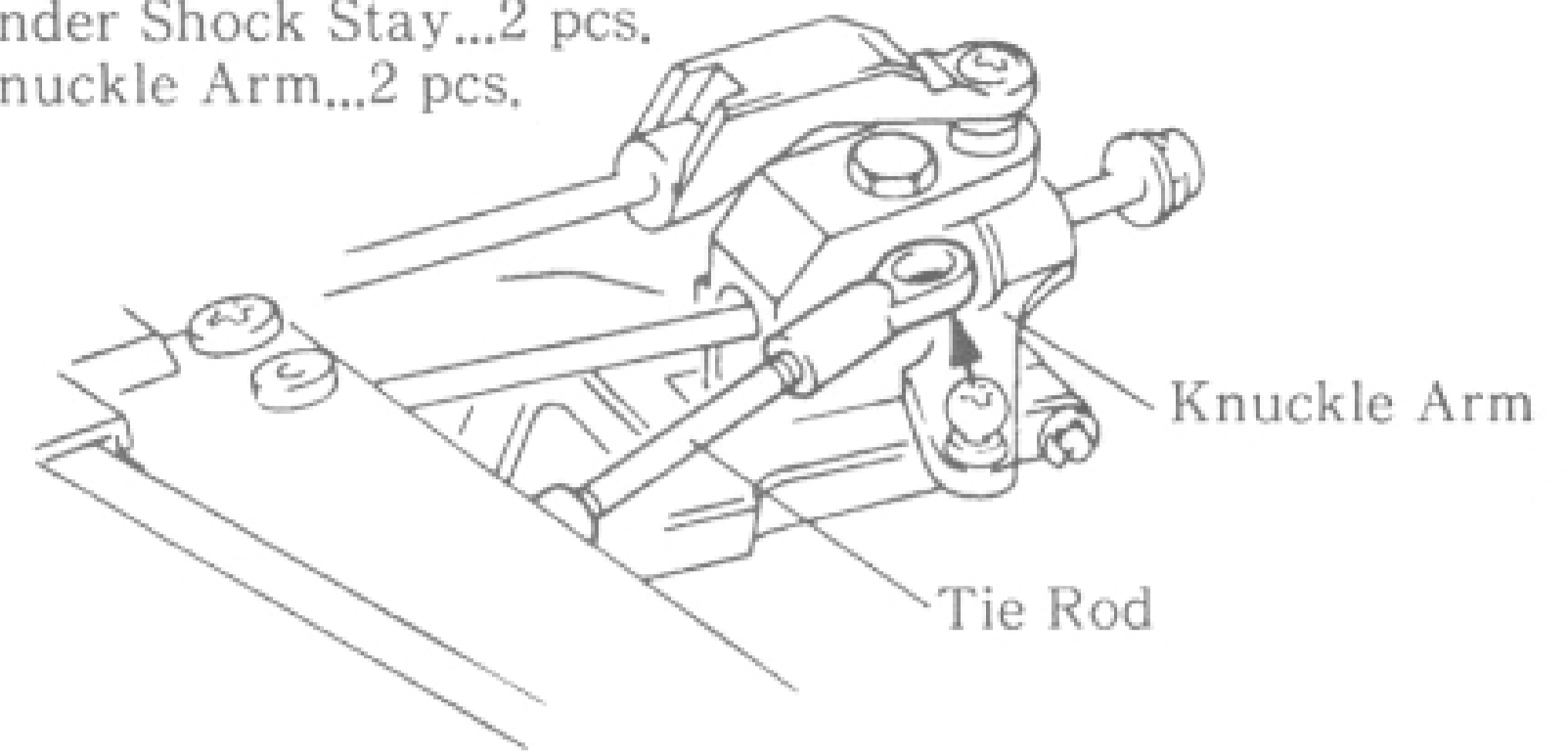
As a standard, on course with bad grips it is set close to "A" and on good grip course, close to "B".



### < Disassembly of front Portion >

Can dismount the front portion by removing 6 pcs. of screws as shown in the drawing below.

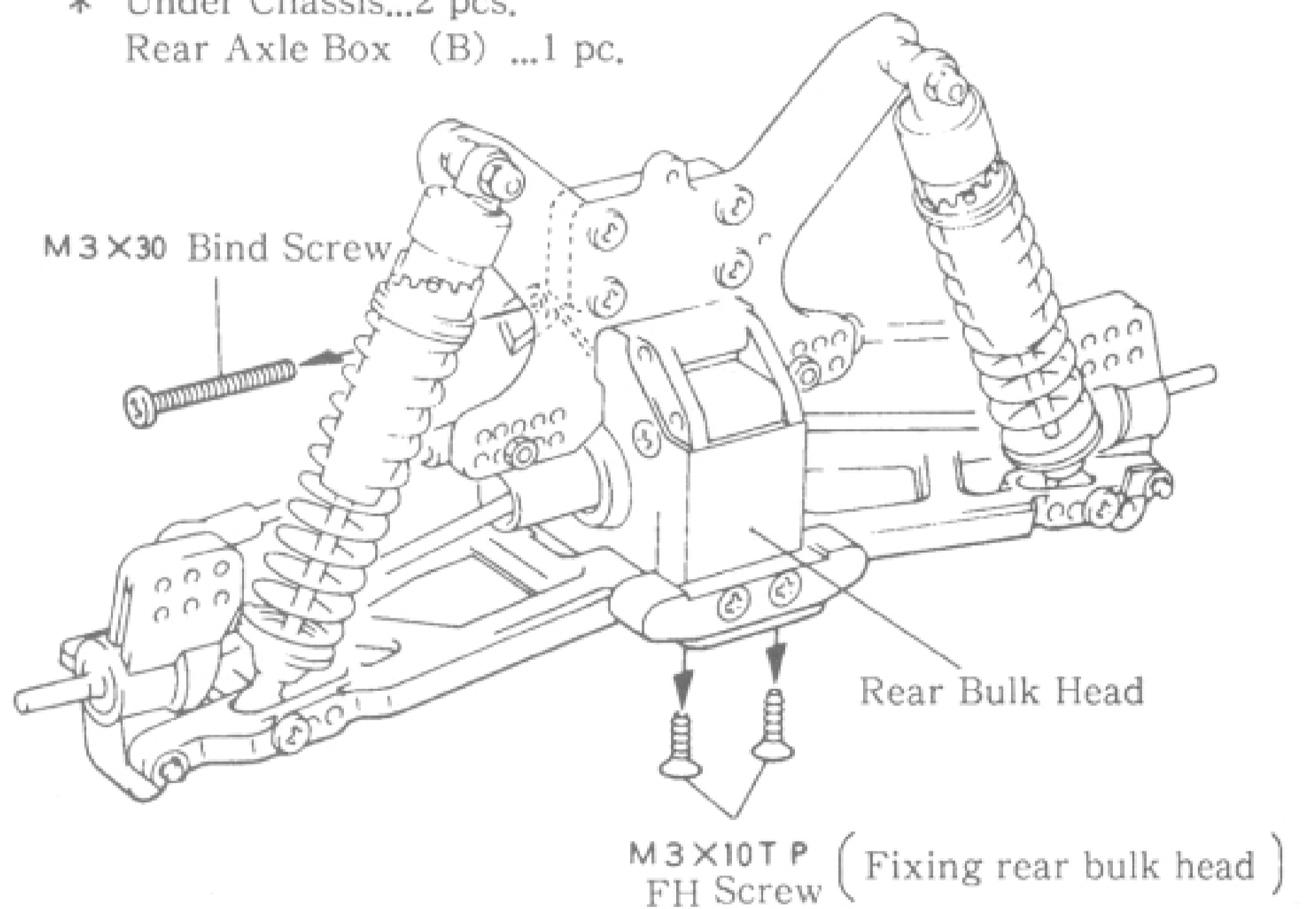
- \* Under Chassis...2 pcs.
- Under Shock Stay...2 pcs.
- Knuckle Arm...2 pcs.



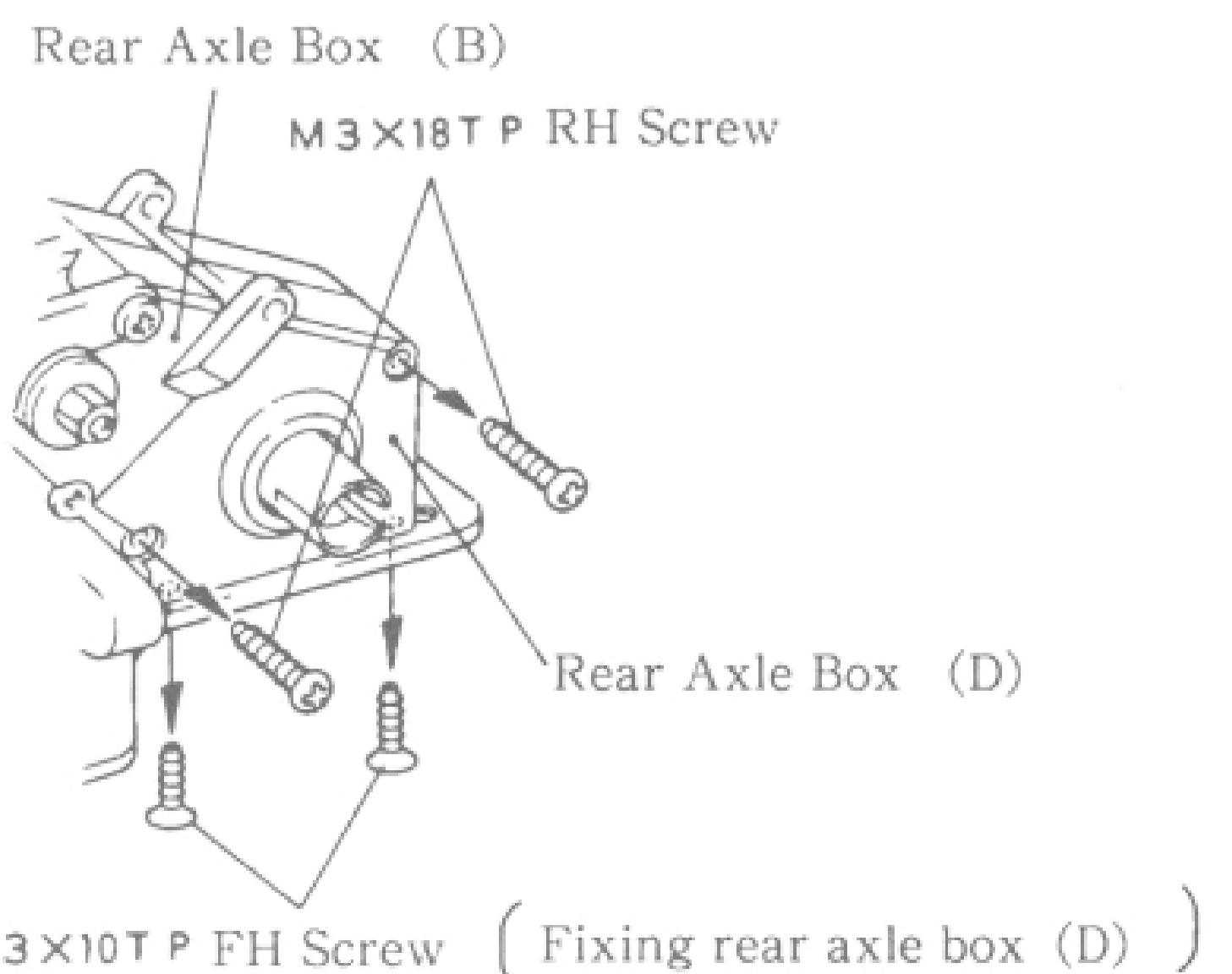
### < Disassembly of Rear Portion >

Can dismount the rear portion by removing 3 pcs. of screw as shown in the drawing below.

- \* Under Chassis...2 pcs.
- Rear Axle Box (B) ...1 pc.



Also can dismount the diff. gear by loosen the four screws.





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*The Super Hobby*

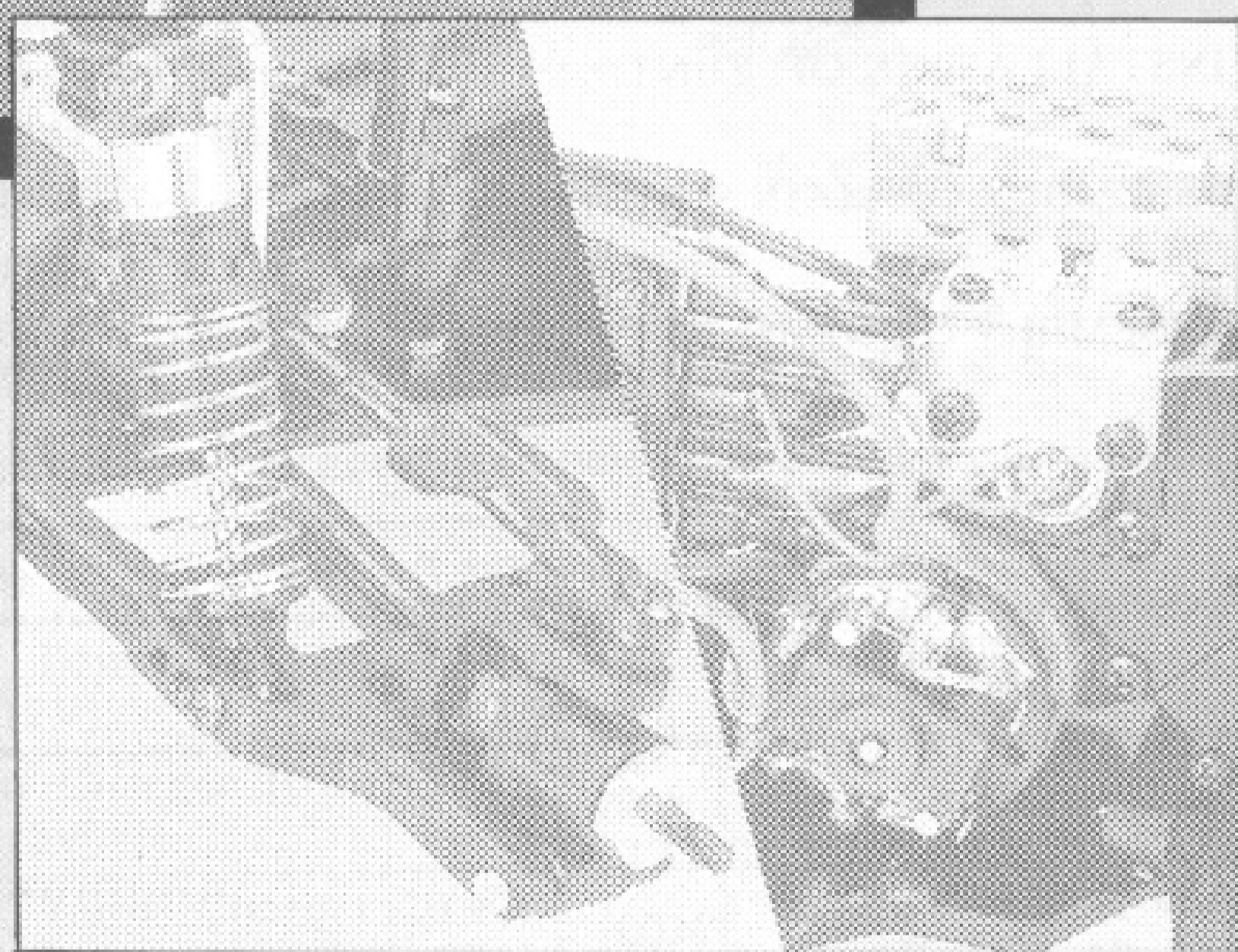
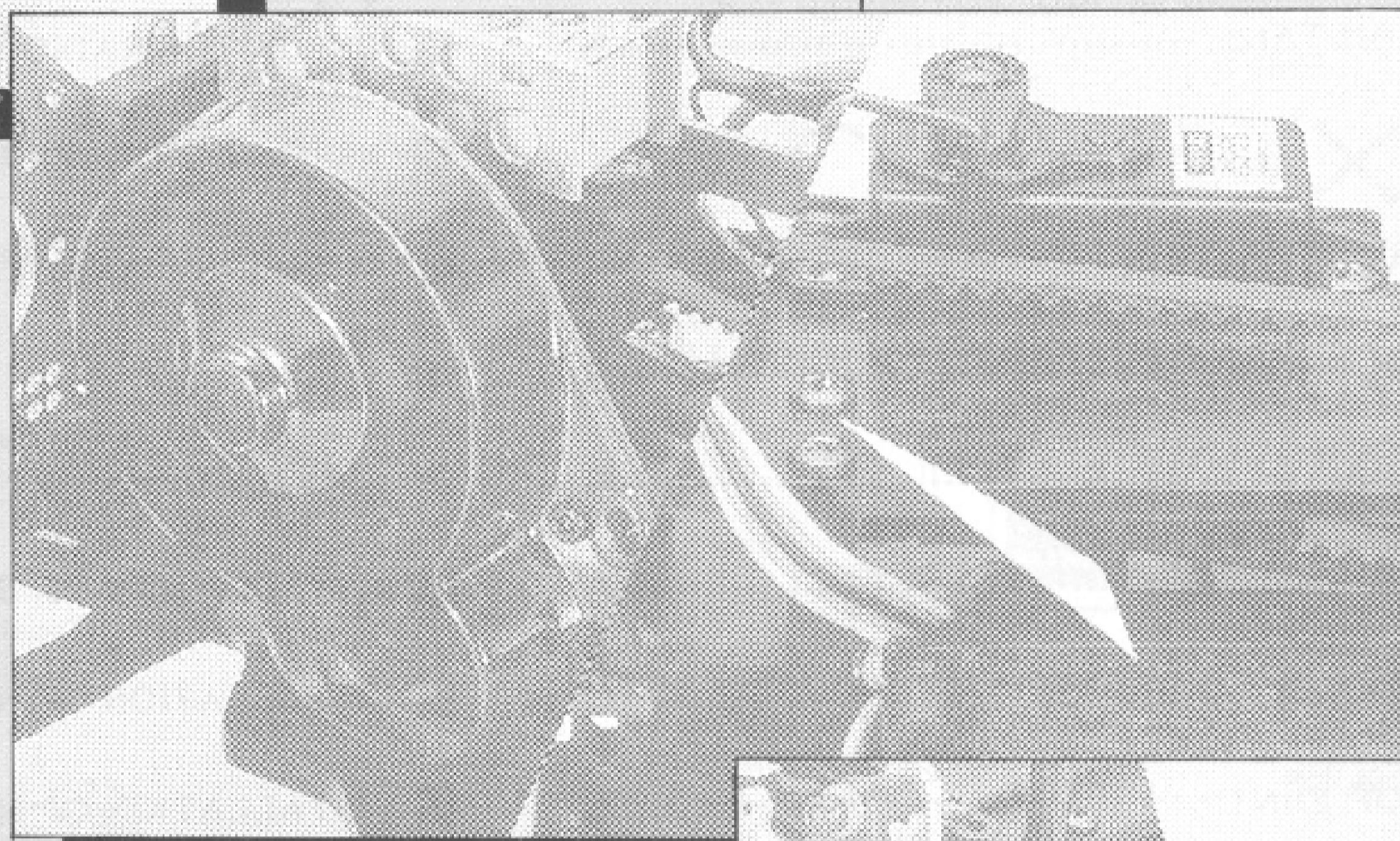
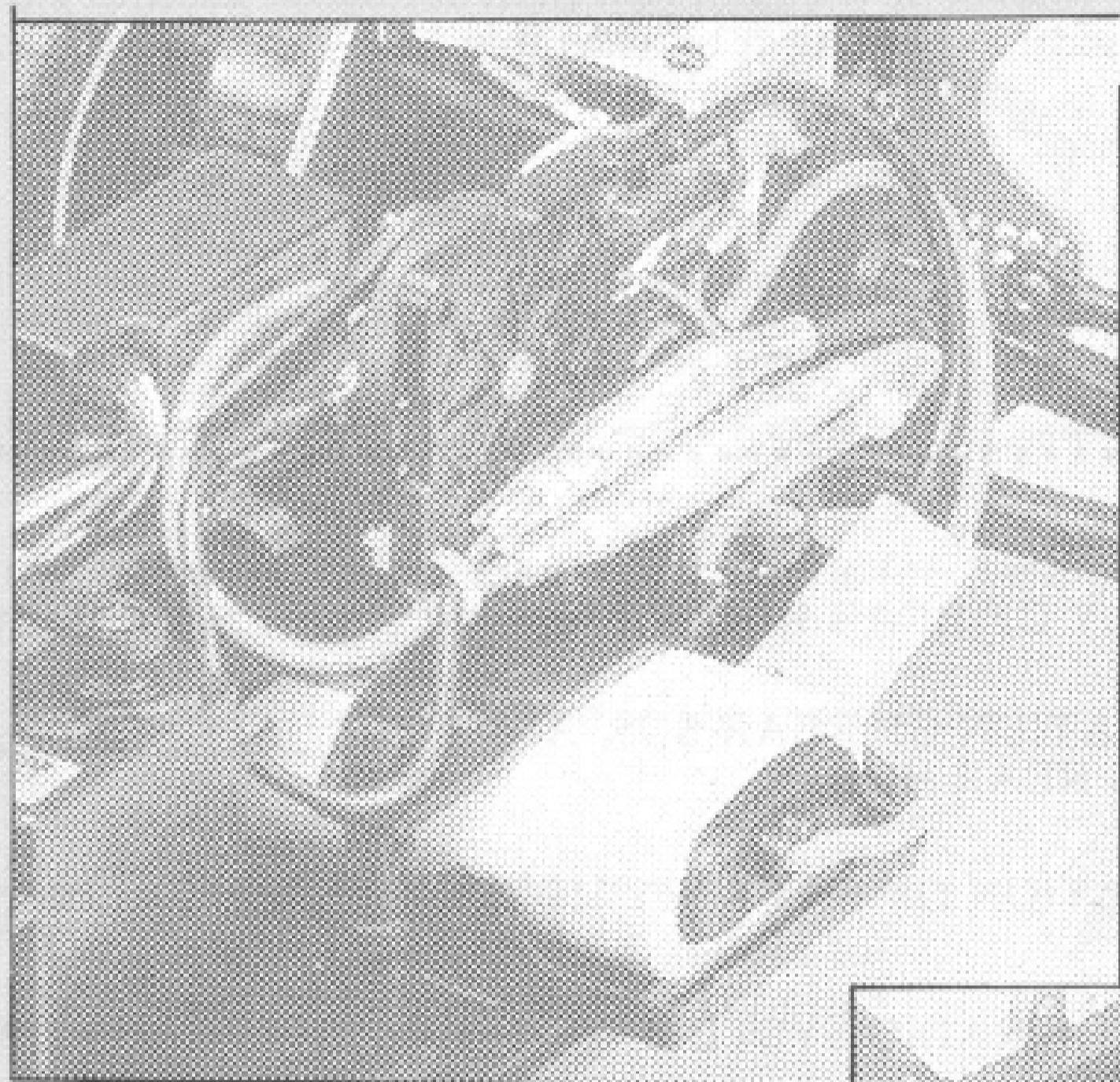


This products is not to be sold in the United States. If you have purchased this product in the United States, please contact Kyosho U.S.A, phone number (217) 398-3630.

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PRINTED IN JAPAN

# RADIO CONTROLLED ELECTRIC POWERED FULL TIME 4WD RACING CARS

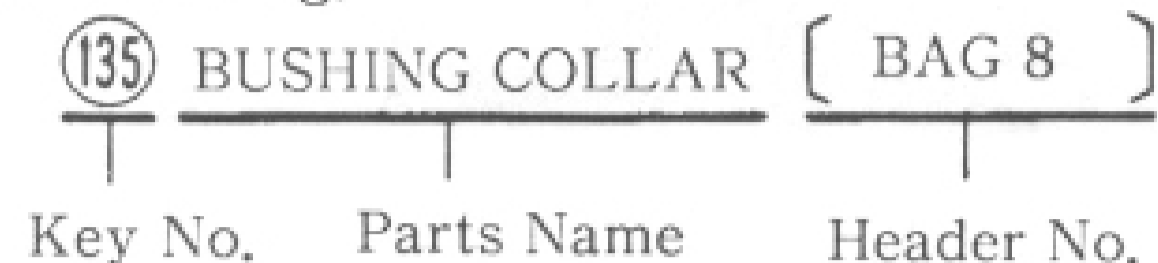


**KYOSHO**<sup>®</sup>  
THE FINEST RADIO CONTROL MODELS

## LIST OF BAGGED PARTS (1)

### 《 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.
- This instruction manual is the following.



Bag No.	Key #	Parts Name	Q'ty	Step	
EP4-1	1	Front Shock Shaft	2	<b>1</b>	
	2	Rear "	2	<b>1</b>	
	3	Front Shock Case	2	<b>1</b>	
	4	Rear "	2	<b>1</b>	
	5	Front Shock Spring	2	<b>2</b>	
	6	Rear "	2	<b>2</b>	
	★ 7	Shock Cap	4	<b>2</b>	
	★ 8	Spring Holder	4	<b>2</b>	
	★ 9	Spring Adjuster	4	<b>2</b>	
	10	Shock Ring	4	<b>2</b>	
	11	Shock End	4	<b>1</b>	
	12	Pressure Top	4	<b>2</b>	
	★ 13	Shock Piston	4	<b>1</b>	
	14	E Ring (E2.5)	8	<b>1</b>	
	15	Shock Oil	1	<b>2</b>	
EP4-3	16	Rod (L30)	3	<b>3</b>	
	17	" (L40)	4	<b>3</b>	
	★ 18	φ 5.8 Ball End	12	<b>3</b>	
	19	φ 4.8 Ball End	1	<b>28</b>	
	20	Front Wheel Shaft	2	<b>13</b>	
	21	Rear "	2	<b>17</b>	
	22	Drive Washer	4	<b>3</b>	
	23	King Pin (S)	2	<b>13</b>	
	24	" (L)	2	<b>13</b>	
	25	M2.6 Pivot Ball (Black)	8	<b>10 12 13 18 22</b>	
	26	M3 Pivot Ball (Silver)	6	<b>10 13 17</b>	
	27	Hub Pin	4	<b>14 18</b>	
	28	φ 3×50 Shaft	2	<b>14</b>	
	29	φ 3×55 Shaft	2	<b>18</b>	
	30	Steering Plate	1	<b>10</b>	
	31	φ 5.8 Ball (Silver)	4	<b>2</b>	
	32	φ 4.8 Ball	1	<b>25</b>	
	33	Saver Spring	1	<b>21</b>	
	34	Front Shock Stay	1	<b>12</b>	
	35	Rear Shock Stay	1	<b>1</b>	
	36	φ 5×φ 8 Bushing	4	<b>10</b>	
	37	φ 5×φ 10 Bushing	8	<b>13 17</b>	
	38	Swing Shaft	4	<b>15 18</b>	
	39	Servo Saver Shaft	2	<b>9</b>	
	40	Speed Control Rod	1	<b>28</b>	
	41	Joint	4	<b>5</b>	
	42	Steering Pin	2	<b>10</b>	
	43	φ 3×φ 6 Bushing Metal	2	<b>10 (flange)</b>	
	EP4-4	44	Front Axle Box (A)	1	<b>12</b>
		45	" (B)	1	<b>11</b>

Bag No.	Key #	Parts Name	Q'ty	Step	
EP4-4	46	Rear Axle Box (A)	1	<b>7</b>	
	47	" (B)	1	<b>7</b>	
	48	" (C)	1	<b>8</b>	
	49	" (D)	1	<b>8</b>	
	◎ 50	Diff. Case	2	◎ Mark Front & Rear Diff. Parts.  <b>5</b>	
	◎ 51	Sprocket	2		
	◎ 52	Bevel Gear (A)	4		
	◎ 53	" (B)	4		
	◎ 54	Bevel Shaft	2		
	◎	M2×12T P RH Screw	8		
	55	Spur Gear	1	<b>6</b>	
	56	Motor Plate (S)	1	<b>7</b>	
	57	" (L)	1	<b>4 7</b>	
	58	Gear Cover	1	<b>4 27</b>	
	59	M3×25 Shaft	1	<b>8</b>	
	60	Controller Mount	1	<b>8</b>	
	61	Drive Pully	1	<b>7</b>	
	62	Drive Hub	1	<b>6</b>	
	★ 63	Pully Flange	2	<b>7 8</b>	
	64	Front Drive Belt	1	<b>8</b>	
	65	Rear "	1	<b>7</b>	
	66	Needle Roller	2	<b>7 8</b>	
	67	Needle Roller Shaft	1	<b>8</b>	
	68	Main Shaft	1	<b>6</b>	
	69	φ 8×φ 14 Bearing	2	<b>7 8</b>	
		Ball Diff. Pully	2	For Ball Diff.	
		Flange	2		
	EP4-5 PLASTIC PARTS	★ 70	Uni Crank (A)	1	<b>10</b>
		★ 71	" (B)	1	<b>10</b>
		★ 72	" (C)	1	<b>10</b>
★ 73		Uni Crank Collar (A)	2	<b>11</b>	
★ 74		Servo Saver	1	<b>21</b>	
★ 75		Saver Ring	1	<b>21</b>	
★ 76		Saver Horn (SL)	1	<b>21</b>	
★ 77		" (SS)	1	<b>21</b>	
★ 78		" (F)	1	<b>21</b>	
★ 79		Saver Washer	1	<b>22</b>	
★ 80		Battery Holder Case (A)	1	<b>19</b>	
★ 81		" (B)	1	<b>19</b>	
★ 82		Stopper Plate	2	<b>31</b>	
★ 83		Stopper Post	4	<b>19</b>	
★ 84		Stopper Washer	4	<b>19</b>	
★ 85	Rear Hub (R)	1	<b>17</b>		
★ 86	" (L)	1	<b>17</b>		
★ 87	Front Hub	2	<b>13</b>		



**LIST OF BAGGED PARTS (2)**

Bag No.	Key #	Parts Name	Q'ty	Step
EP4-5	★ 88	Front Arm Bracket (A)	1	14
	★ 89	• (B)	1	11
	★ 90	Rear Arm Bracket (A)	1	9
	★ 91	• (B)	1	18 Page
	★ 92	• (C)	1	18
	★ 93	Antenna Post	1	9
	★ 94	Servo Stay (S)	2	22
	★ 95	• (L)	2	23
	★ 96	Shock Collar	4	30
	★ 97	Upper Rod End	2	3
	★ 98	Uni Crank Collar (B)	2	11
	★ 99	Knuckle Arm (R)	1	13
	★ 100	• (L)	1	13
	★ 101	Front Sus. Arm	2	14
	★ 102	Rear •	2	18
	★ 103	Rear Bulk Head	1	3
	★ 104	Upper Deck Mount (A)	1	9
	★ 105	• (B)	1	9
	★ 106	Mount Collar (A)	1	9
	★ 107	• (B)	1	28
EP4-6	108	Upper Deck	1	24
	109	Belt Guide	1	3
	110	Pinion Gear (20 T)	1	27
	111	Rotary Speed Controller	1	25
	112	15W Register	1	26
	113	Register Heatsink	1	26
	114	Register Base	1	26
	115	Motor Code	1	27
	116	Double Sided Tape	1	29
	117	Strap (S)	2	29
	118	Antenna Pipe	1	29
	119	Screw Locking Compound	1	
120	Hobby Grease	1		
EP4-7	121	Front Wheel (56 Size)	2	2
	134	Rear • ( • )	2	2
EP4-8 (SPORT)	122	Bumper	1	16
	123	Motor	1	27
	135	Bushing Collar	4	5
	136	φ 10×φ 14 Bushing	4	5
	▲137	Wing Stay (A)	2	1
	▲138	• (B)	2	1
	▲139	• (C)	2	1
	▲140	Wing Washer	4	1 spare x2
	141	Double Sided Tape	1	1
	▲142	Body Mount	4	1 spare x2
	143	Body Pin	3	1
	144	Hook Pin	2	1
		T P Bind Screw M2.6X12	4	1
		• M3X8	5	1 spare x1
		T P FH Screw M3X10	3	1 spare x1

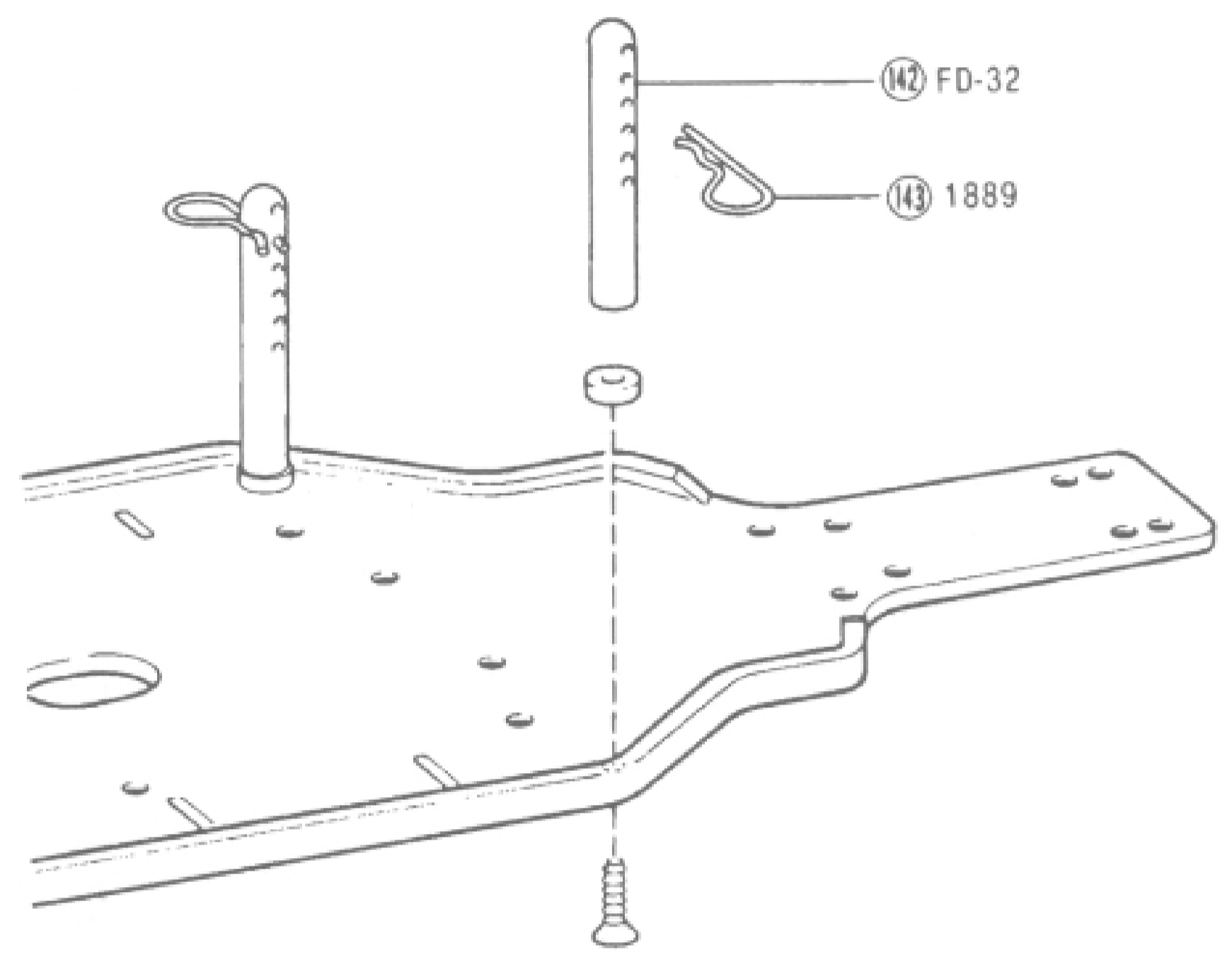
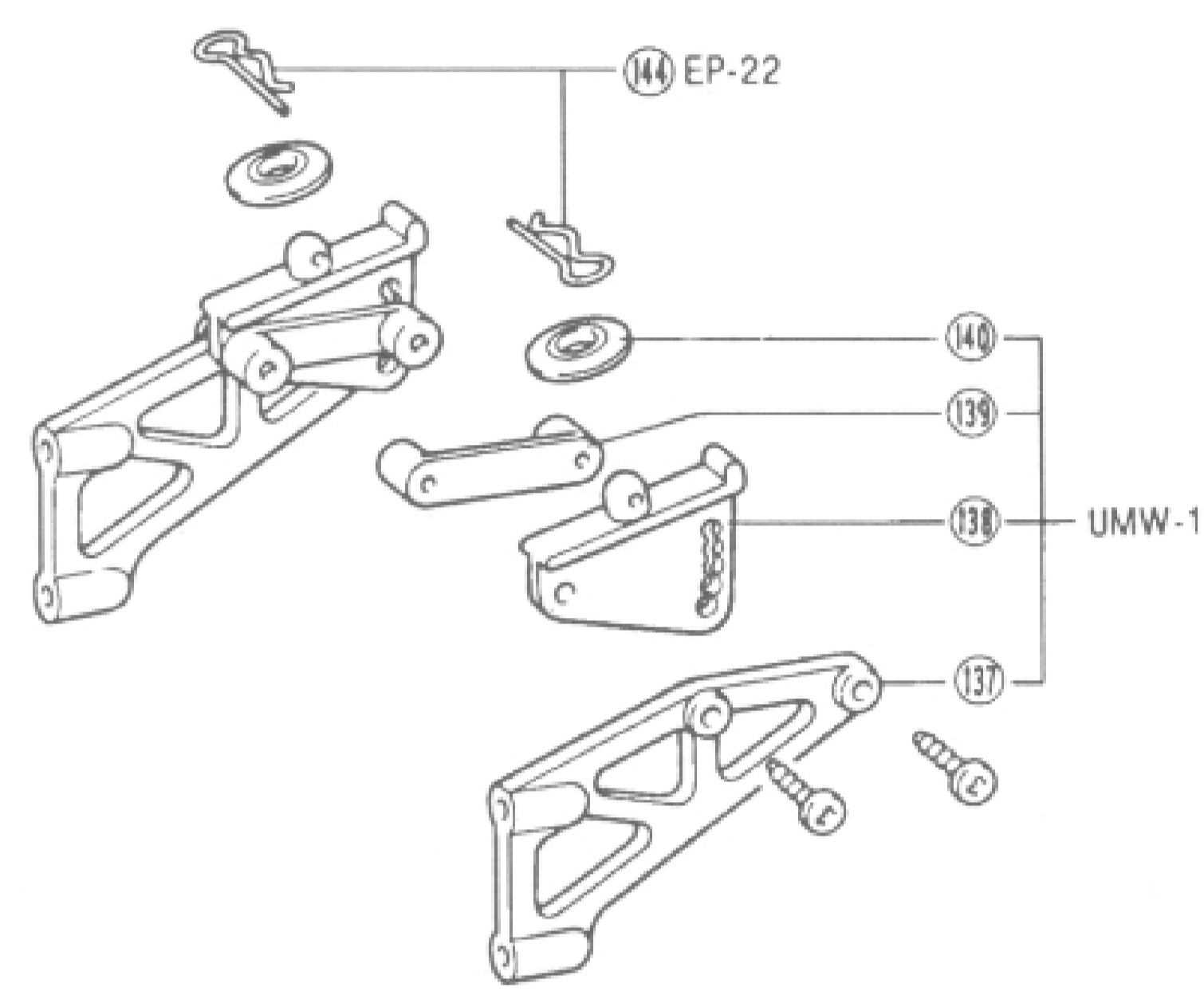
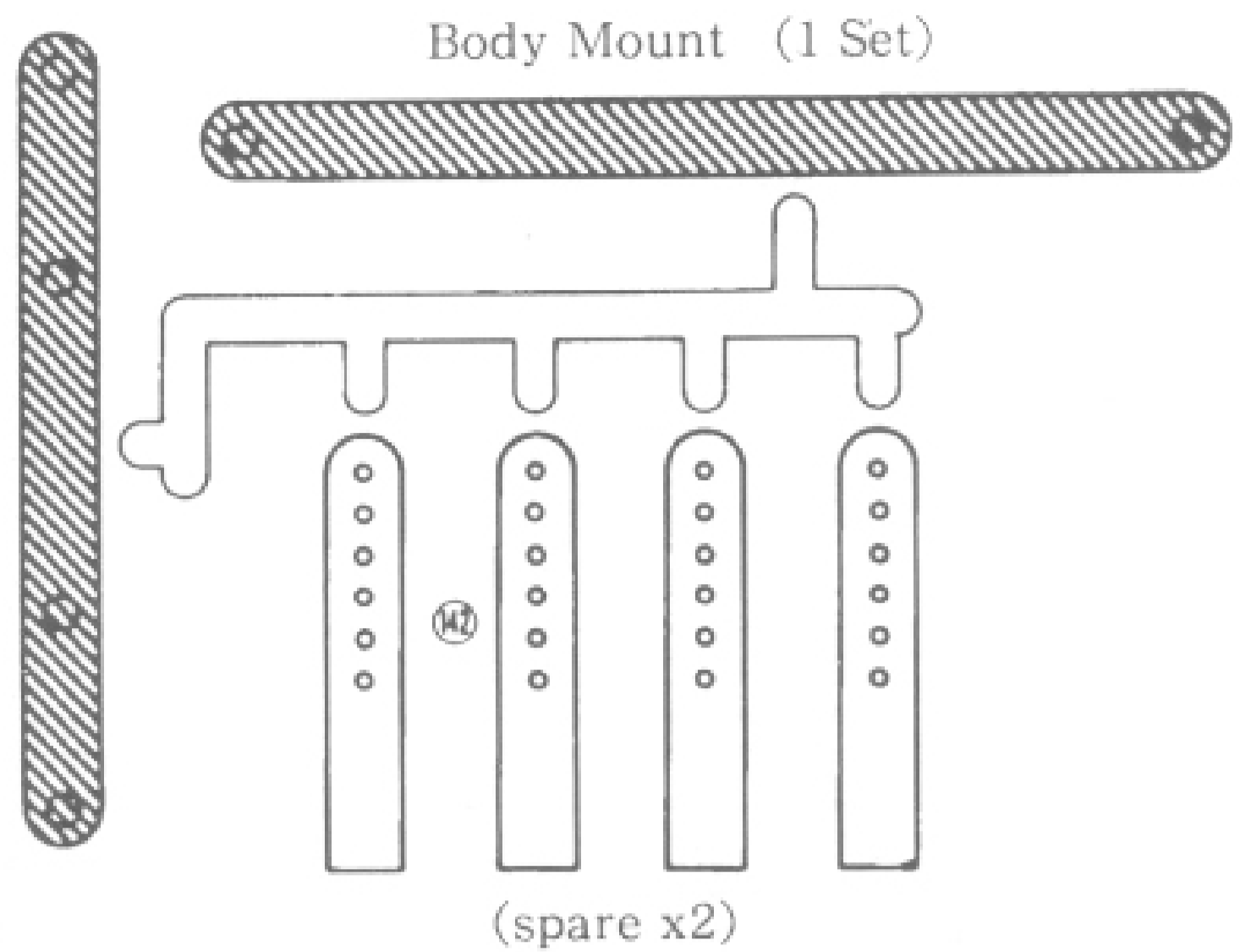
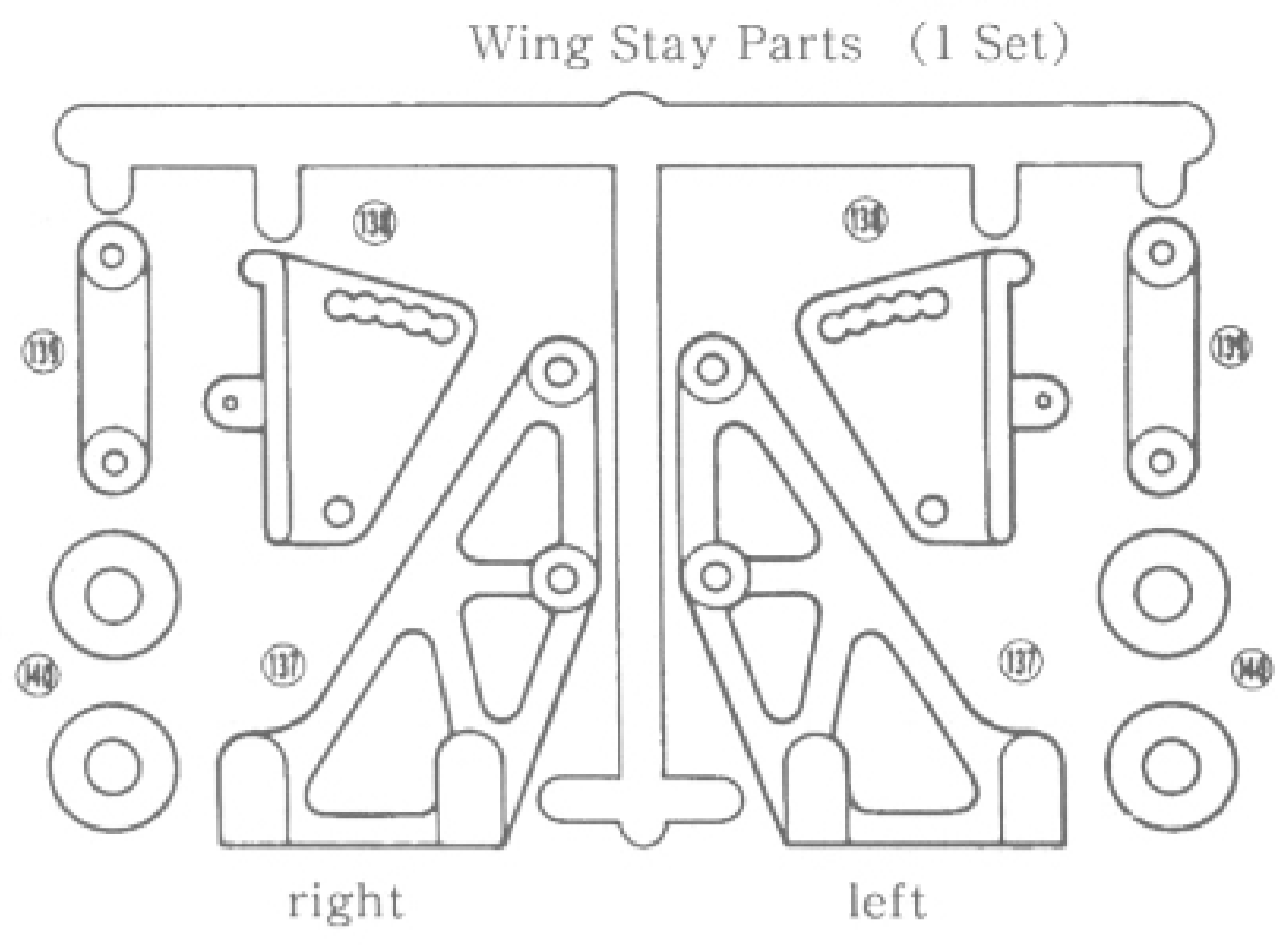
Bag No.	Key #	Parts Name	Q'ty	Step	
BOX	124	Main Chassis	1	9	
	125	Front Tire (56 Size)	2	2	
	126	Body	1	1	
	127	Decal	1	6	
	128	Cross Wrench	1		
	145	Rear Tire (56 Size)	2	2	
	146	Wing	1	4	
	147	Side Wing	1	4	
		Instruction	1		
	EP4-2 Screws, Nuts, Washers & Others	129	E Ring (E2.5)	5	13 14 18
		130	• (E3)	1	6
		131	Allen Wrench (1.5)	1	27
		132	• (2)	1	5 8
133		φ 4 X φ 10 Shim	2	8	
		RH Screw M2X4	1		
		• M3X4	4		
		• M3X12	6		
		Bind Screw M3X6	9		
		• M3X18	4		
		• M3X30	1		
		• M3X35	1		
		• M3X45	2		
		• M4X8	5		
		FH Screw M3X6	2		
		T P RH Screw M2X8	1		
		• M3X18	2		
		T P Bind Screw M2.6X12	1		
		• M3X8	6		
		• M3X10	9		
		• M3X12	2		
		• M3X15	1		
		T P FH Screw M3X10	19		
		• M3X12	4		
		• M3X15	6		
		Nut M2.6	12		
		• M3	8		
		Nylon Nut M2.6 (x3)	2		
		• M3	5		
		• M4 Flange	4		
	Set Screw M3X3	1			
	• M4X4	4			
	Washer M2.6	2	(Black)		
	• M3	2			
	• M5	4			
	Allen Wrench (2.5)	1			

(1) The key numbers with ★ indicated the plastic parts on a runner.  
 \*\*\* Layout drawing on the runner.\*\*\*  
 ★ mark Chassis assembly/Common instruction (4 Page)  
 ▲ mark Another Sheet instruction (4 Page)  
 (2) There are spare Screws to assemble. Use it for spare.



LAYOUT DRAWING & EXPLODED VIEW OF PLASTIC PARTS ON RUNNERS.  
(EXCEPT THE COMMON INSTRUCTION)

 These shaded parts are not used.



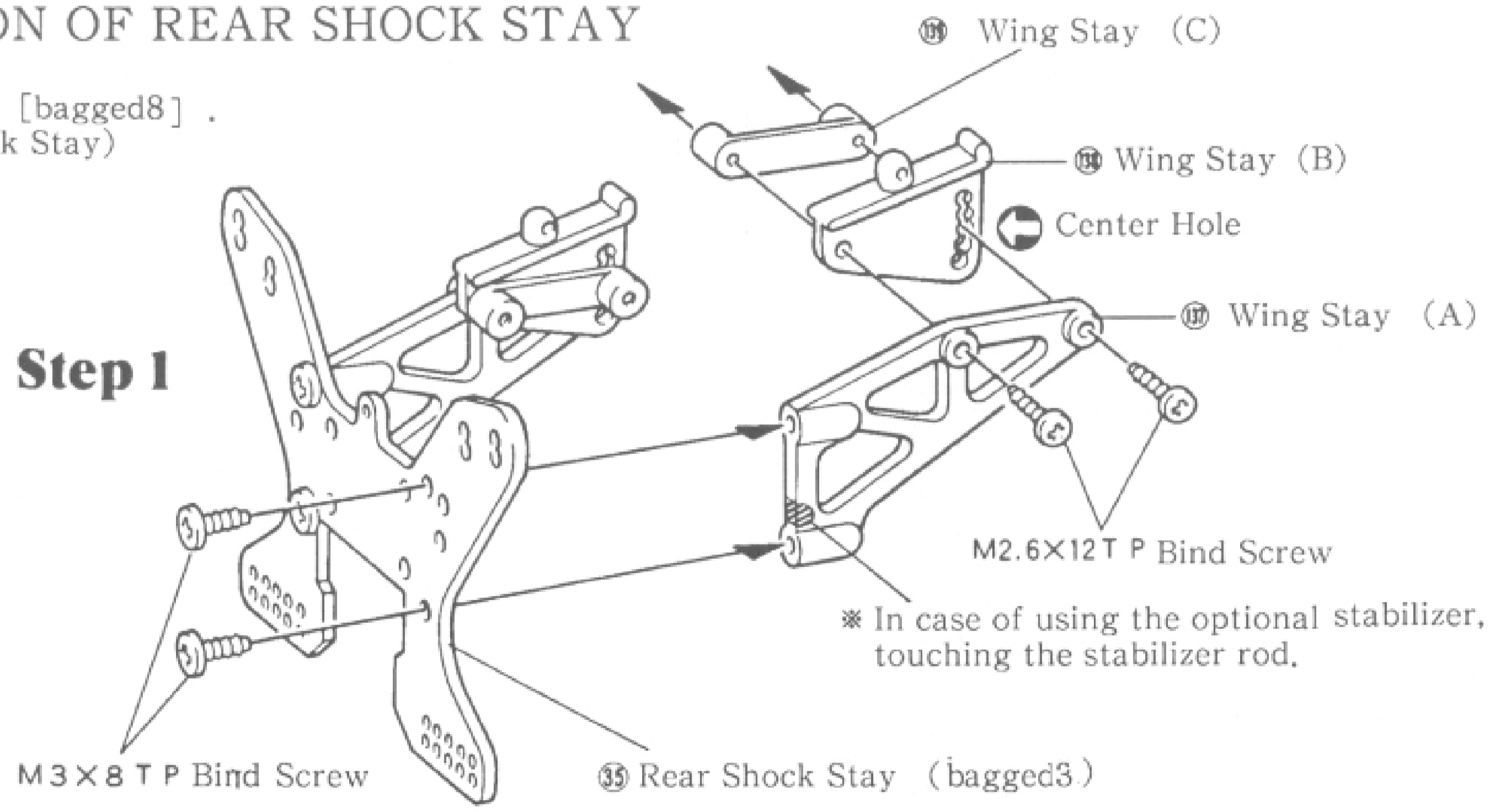
ASSEMBLY OF CHASSIS PORTION ① ~ ③ . (EXCEPT THE COMMON INSTRUCTION)

① INSTALLATION OF REAR SHOCK STAY

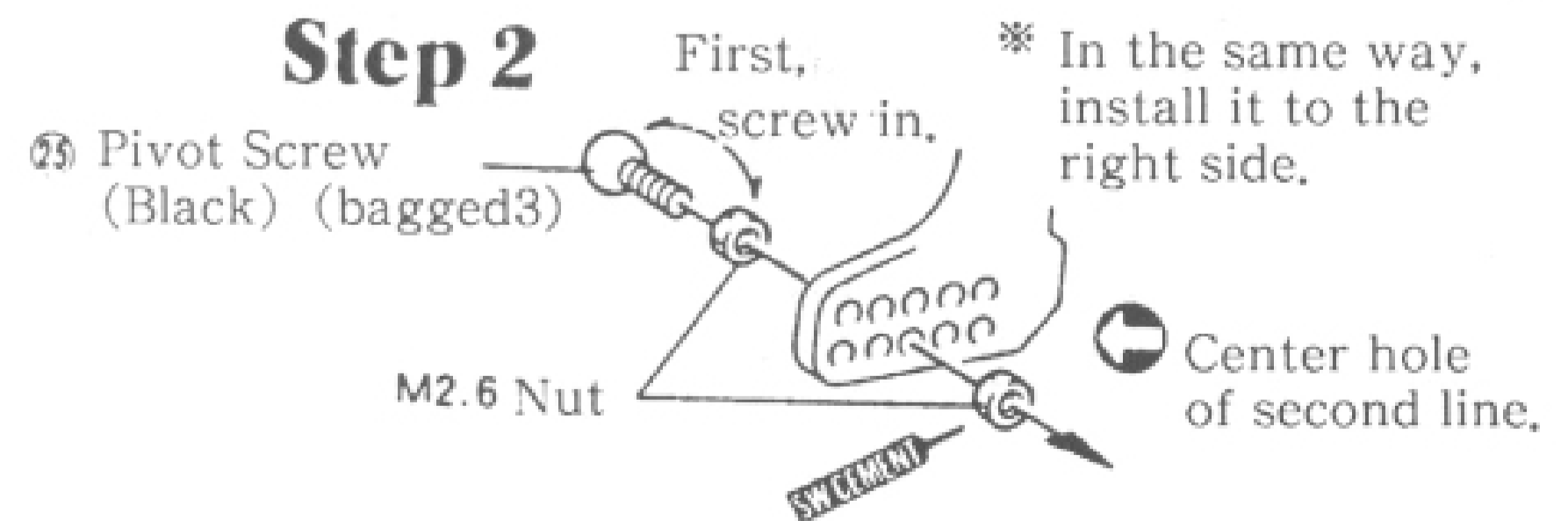
\* These parts are in [bagged8] .  
(Except Rear Shock Stay)

- M2.6X12T P Bind Screw 4
- M3X8T P Bind Screw 8
- M2.6 Nut 4

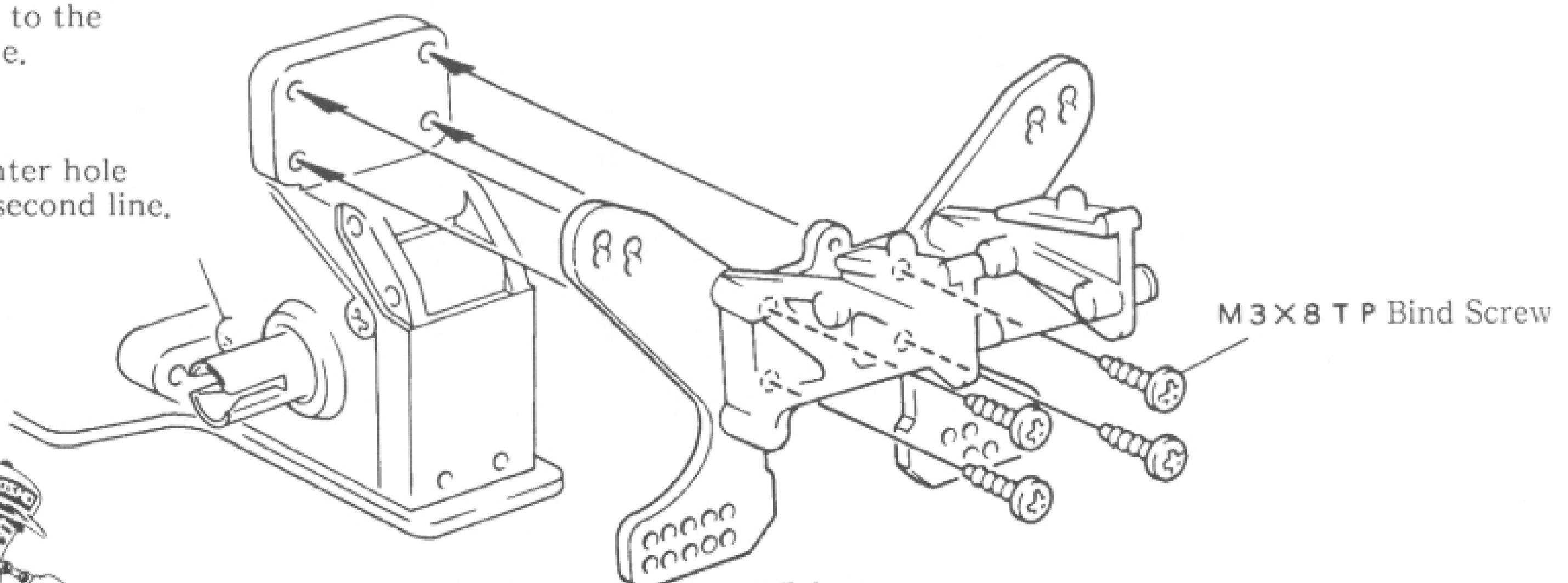
Step 1



Step 2

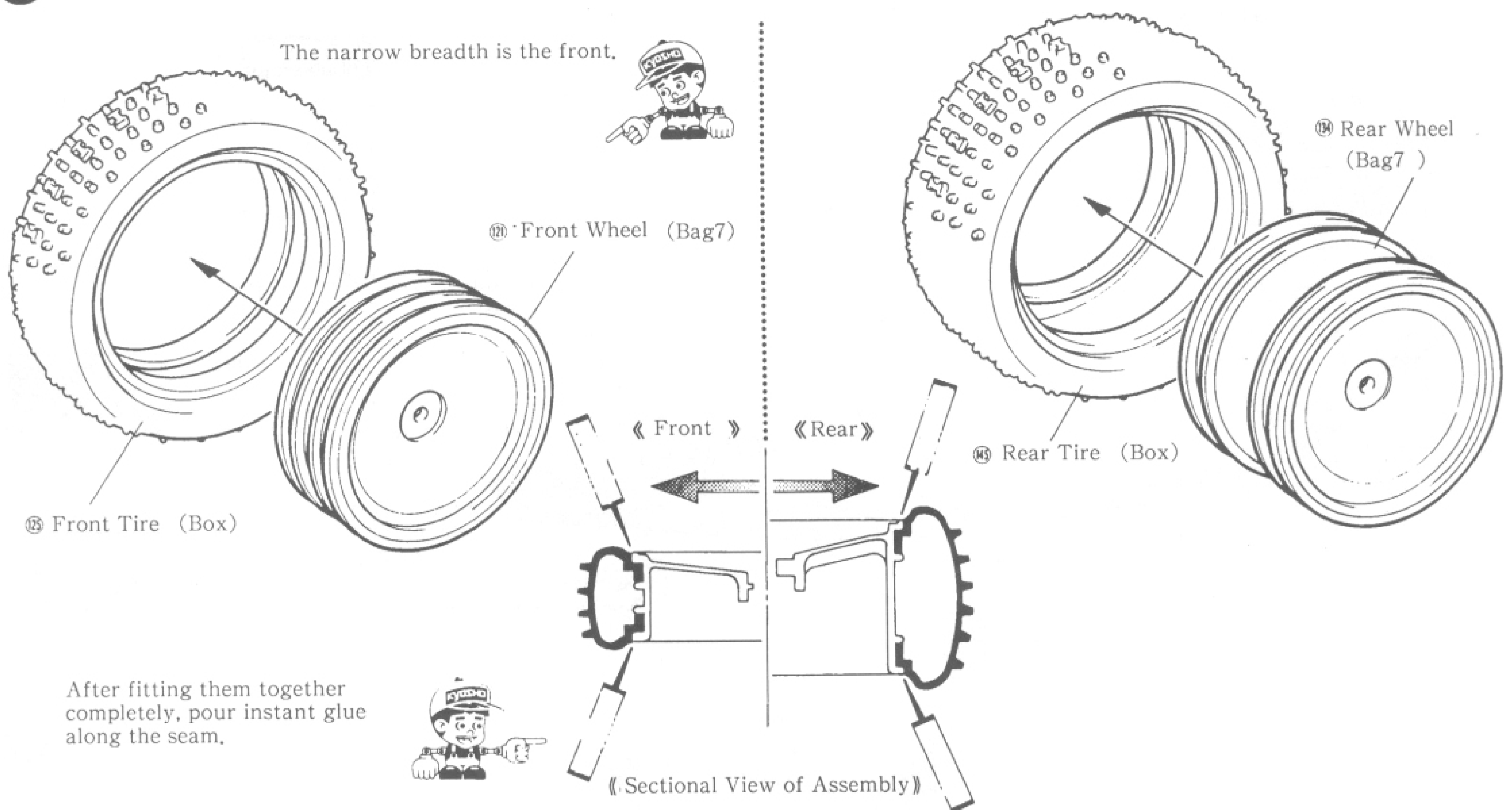


Step 3

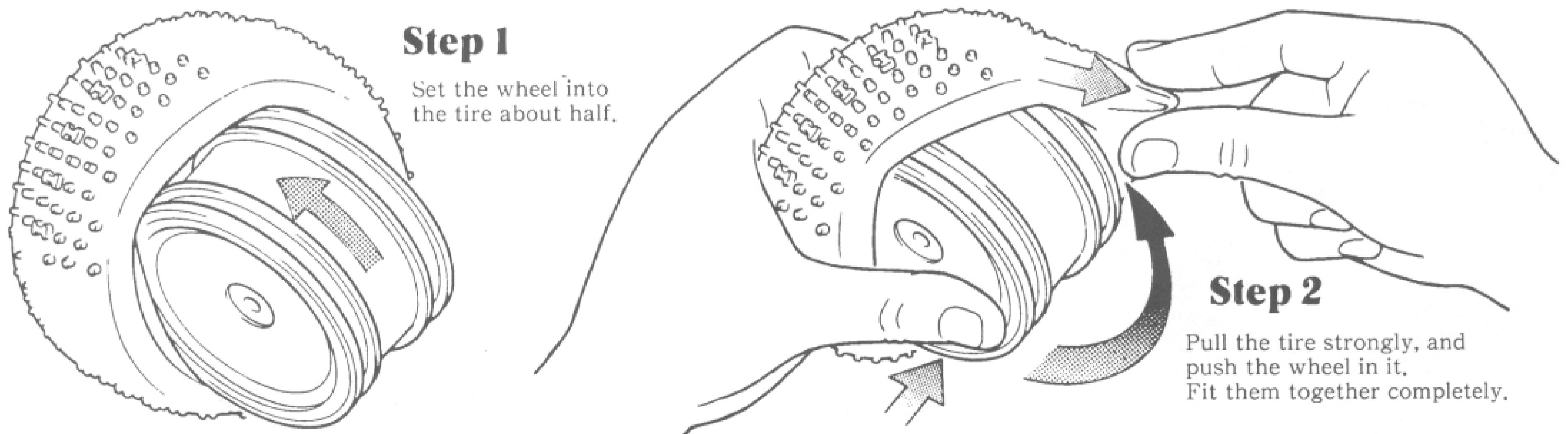


After this assembly is finished, next do to ⑩ ( COMMON INSTRUCTION MANUAL ),

## 2 ASSEMBLY OF TIRE AND WHEEL \* The shape of tire and wheel are different each kits.

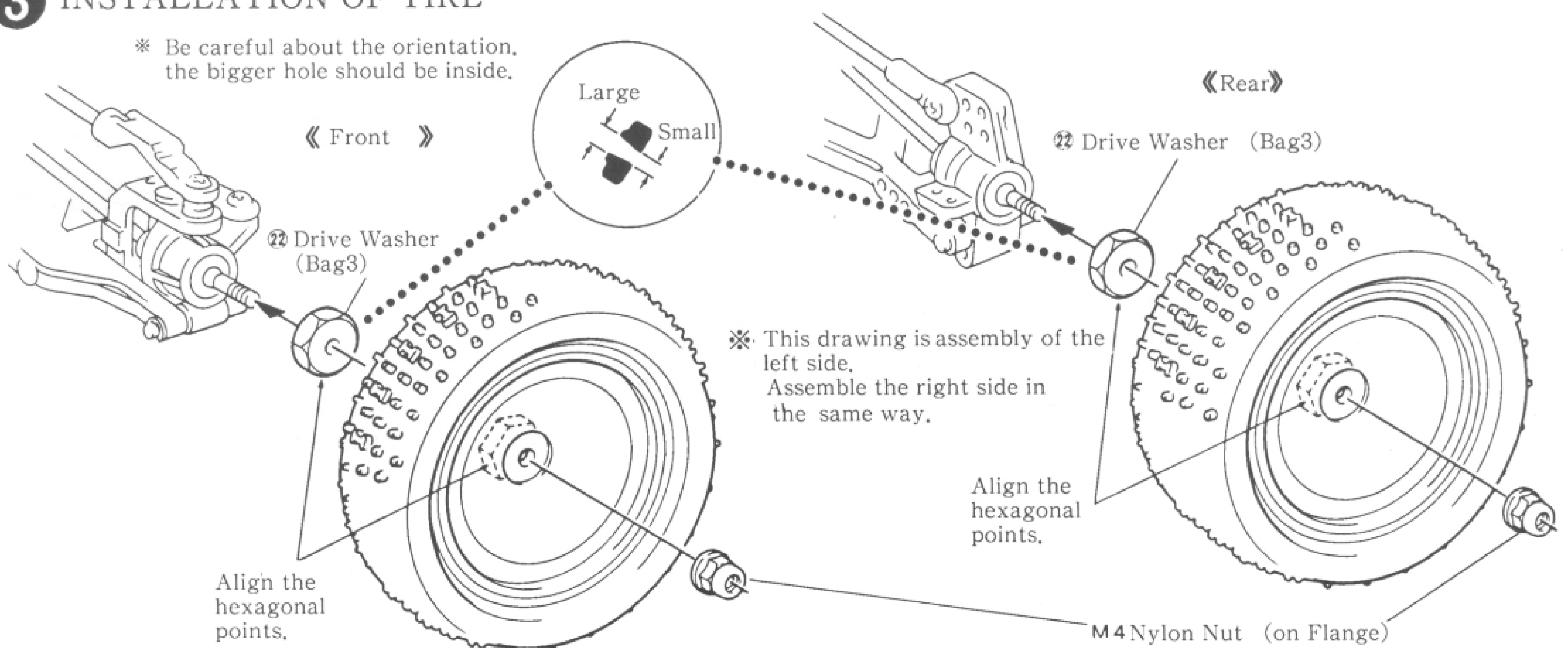


« How to set the wheel »



## 3 INSTALLATION OF TIRE

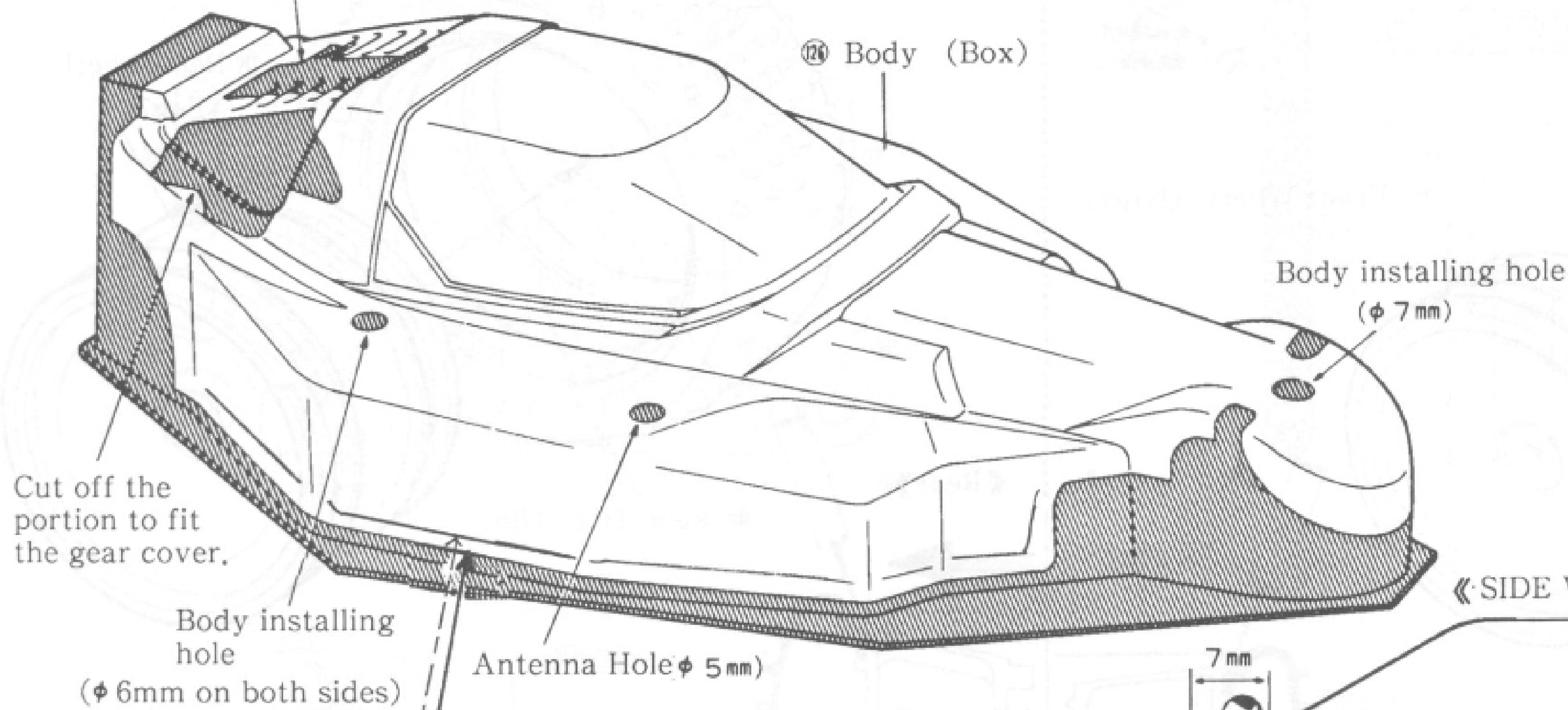
\* Be careful about the orientation, the bigger hole should be inside.



# 4 CUTTING BODY & WING

Cut off this portion to fit the resistor heatsink.

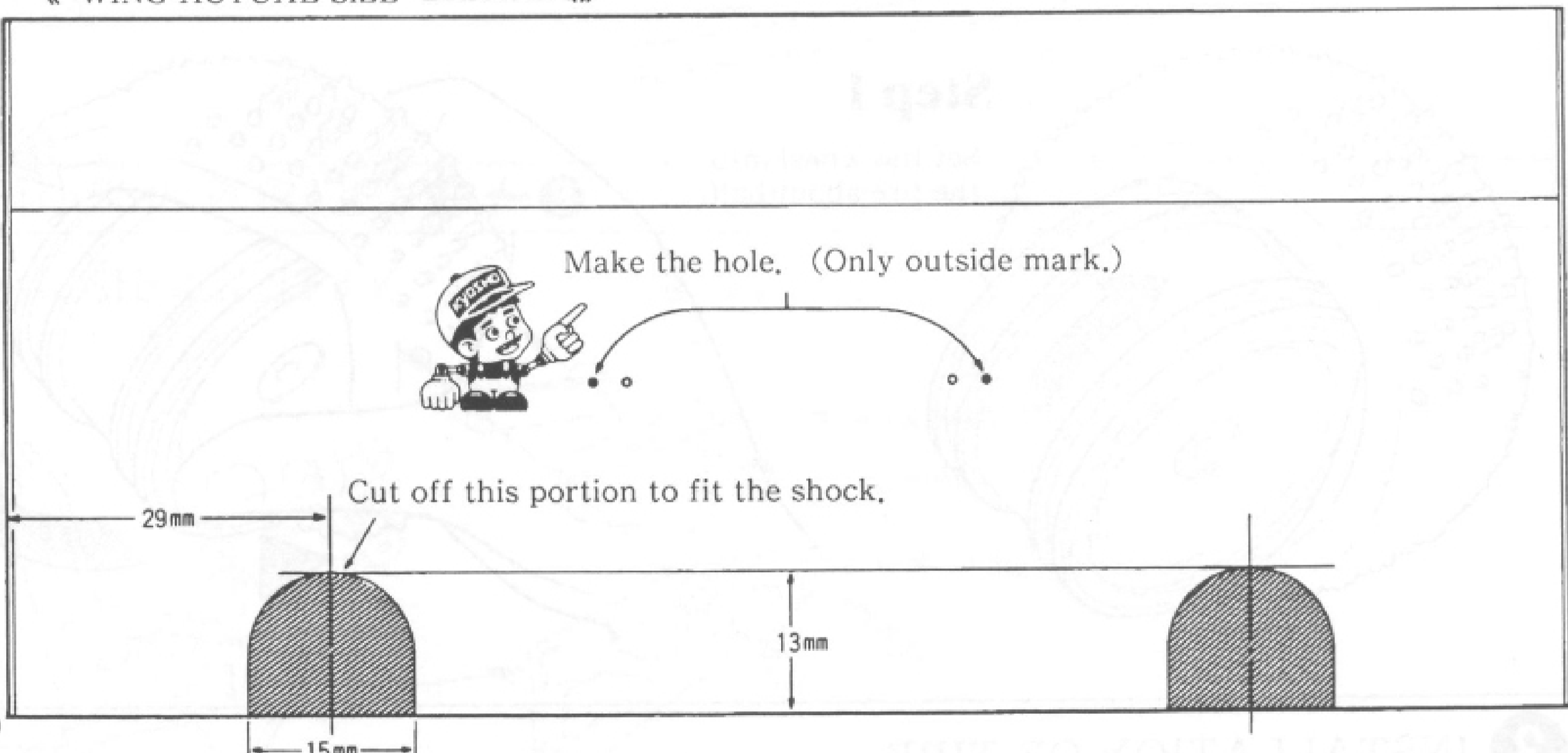
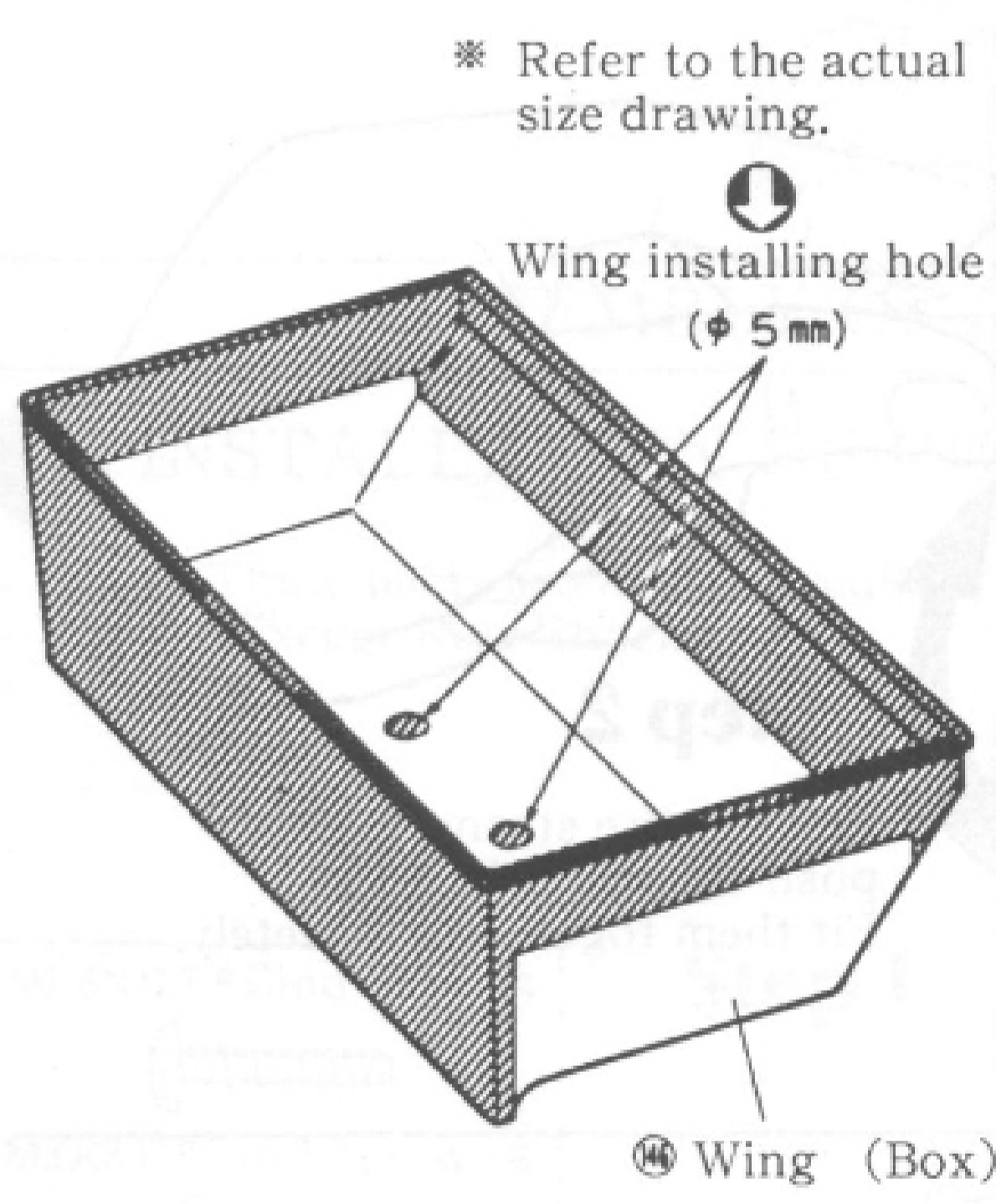
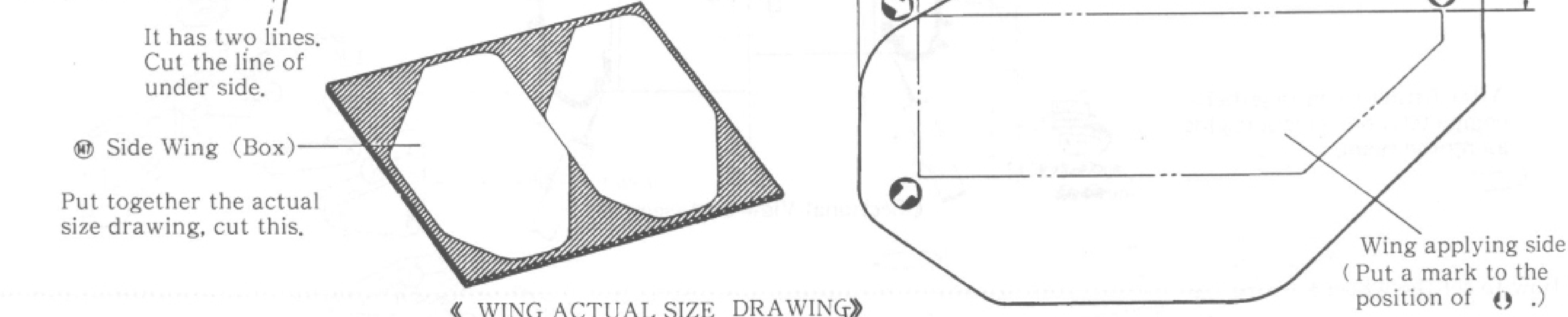
- Cut off the shaded area.
- Finish the cut line with sander.



**KYOSHO** No. 1829

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

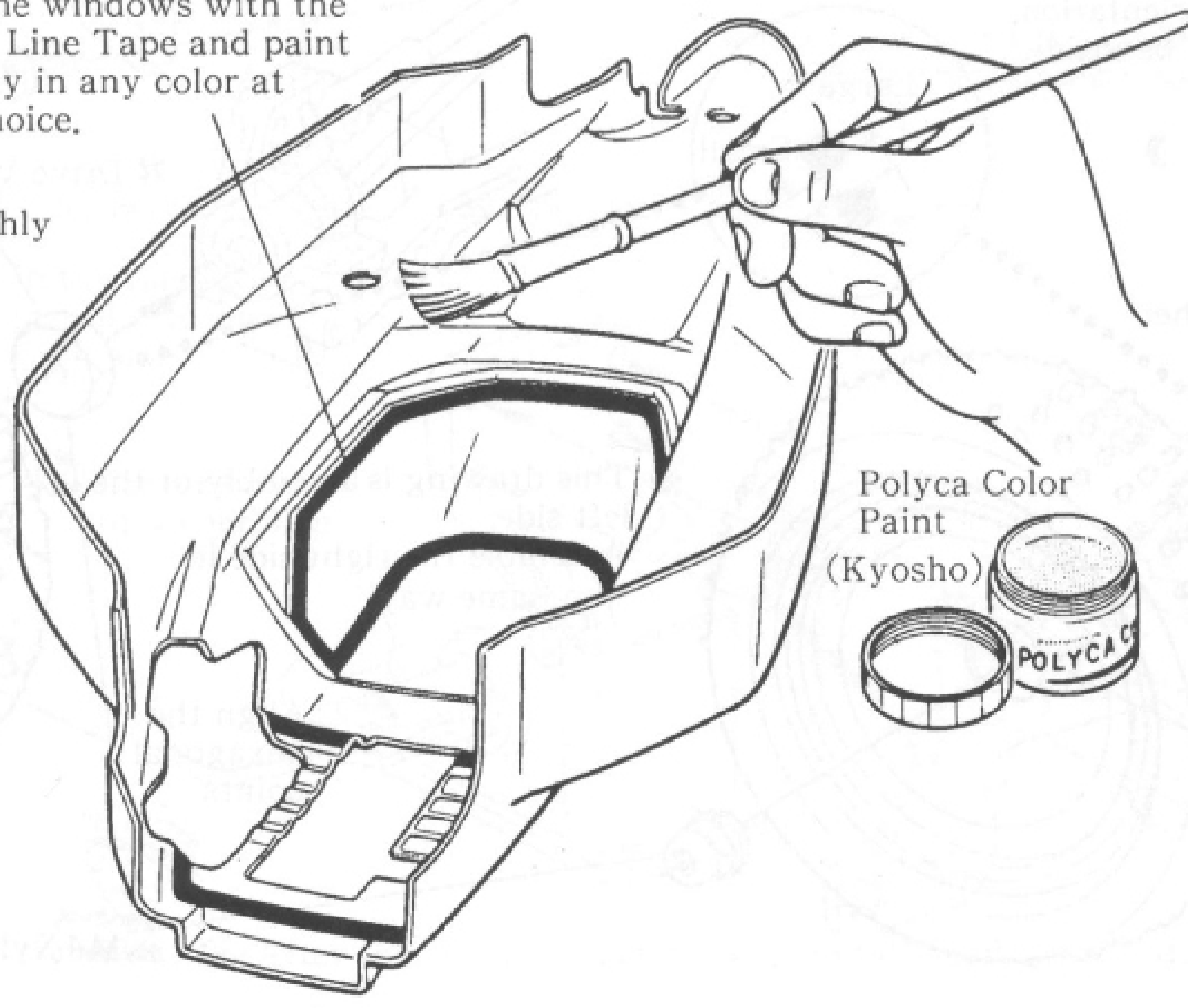
- Round Cutter
- Sander



# 5 PAINTING

Mask the windows with the Micron Line Tape and paint the body in any color at your choice.

First wash the body to remove any oil or dirt and rinse thoroughly with clean water. 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.



**KYOSHO**

- No. 1841 ..1mm
- No. 1842...1.5mm
- No. 1843...2.5mm
- Color: White, Red, Yellow, Green, Blue and Black

No. 1841 ~ 3

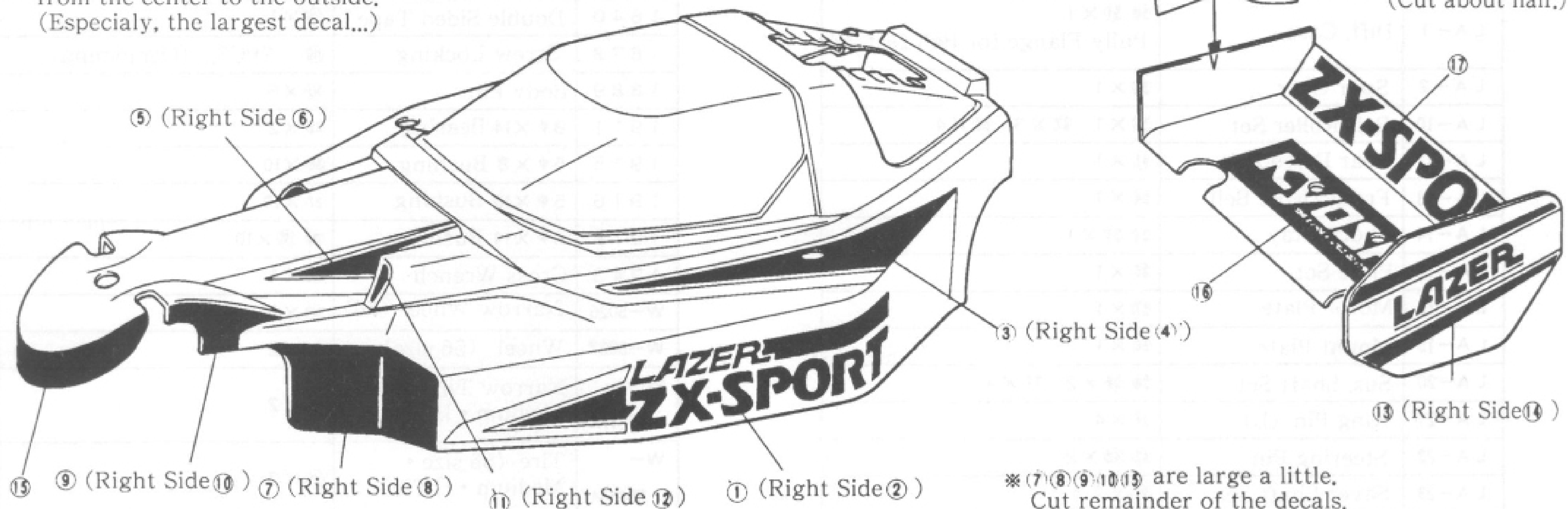
**KYOSHO** No. 2230

- White, Red, Yellow, Blue, Skyblue, Green, Orange, Black, Violet, F. Orange, F. Pink, Yellow Green, and Calsonic Blue

## 6 ASSEMBLY OF WING AND APPLYING DECAL

« Attention of applying the decal. »

- Cut off the decals along the cutout line with scissors.
- Do not apply suddenly, Convince yourself of the position by trying the decals with the backing paper on.
- Be careful not to have air bubbles left. Apply it by a way of pushing up from the center to the outside. (Especially, the largest decal...)



## 7 INSTALLATION OF BODY & WING

\* These parts are in (bagged 8) .  
(Except the plastic collar.)

### Step 1 LEFT

\* Install it to the right side in the same way.

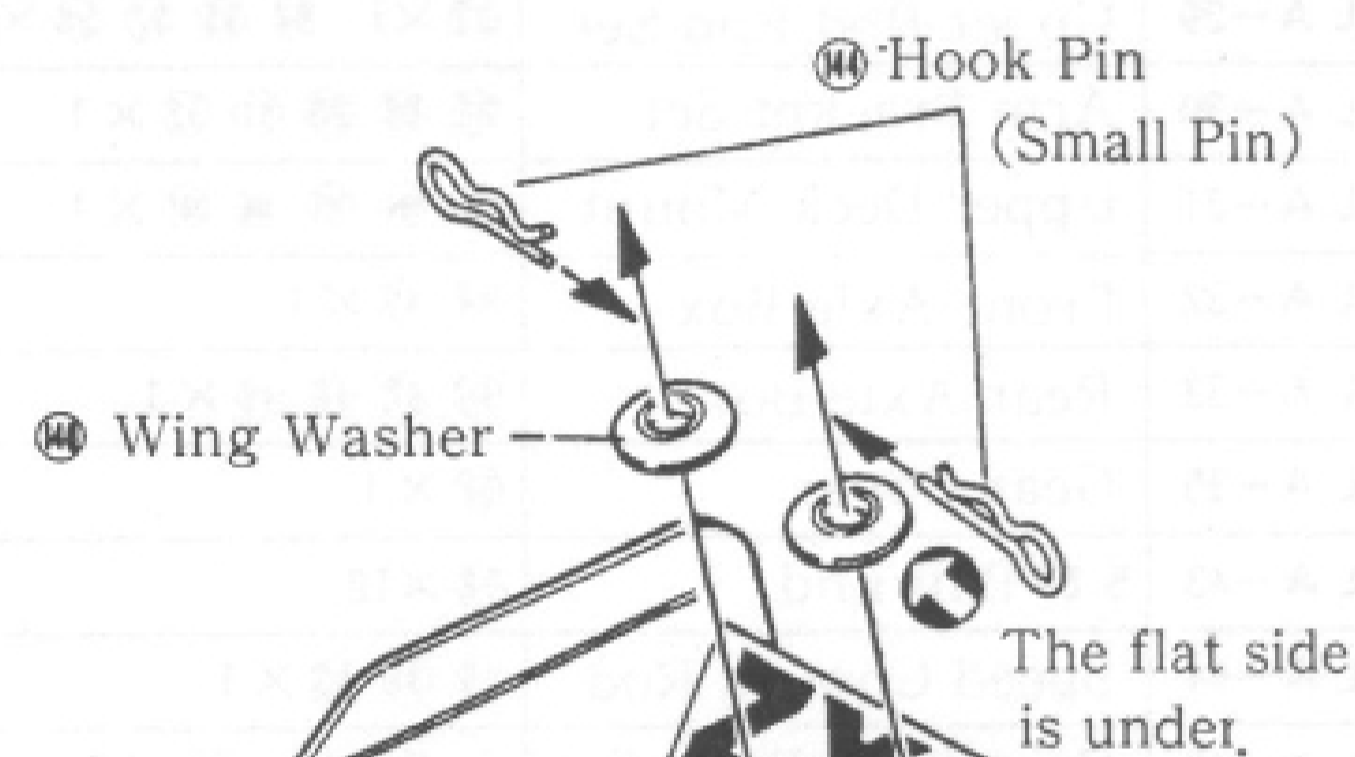
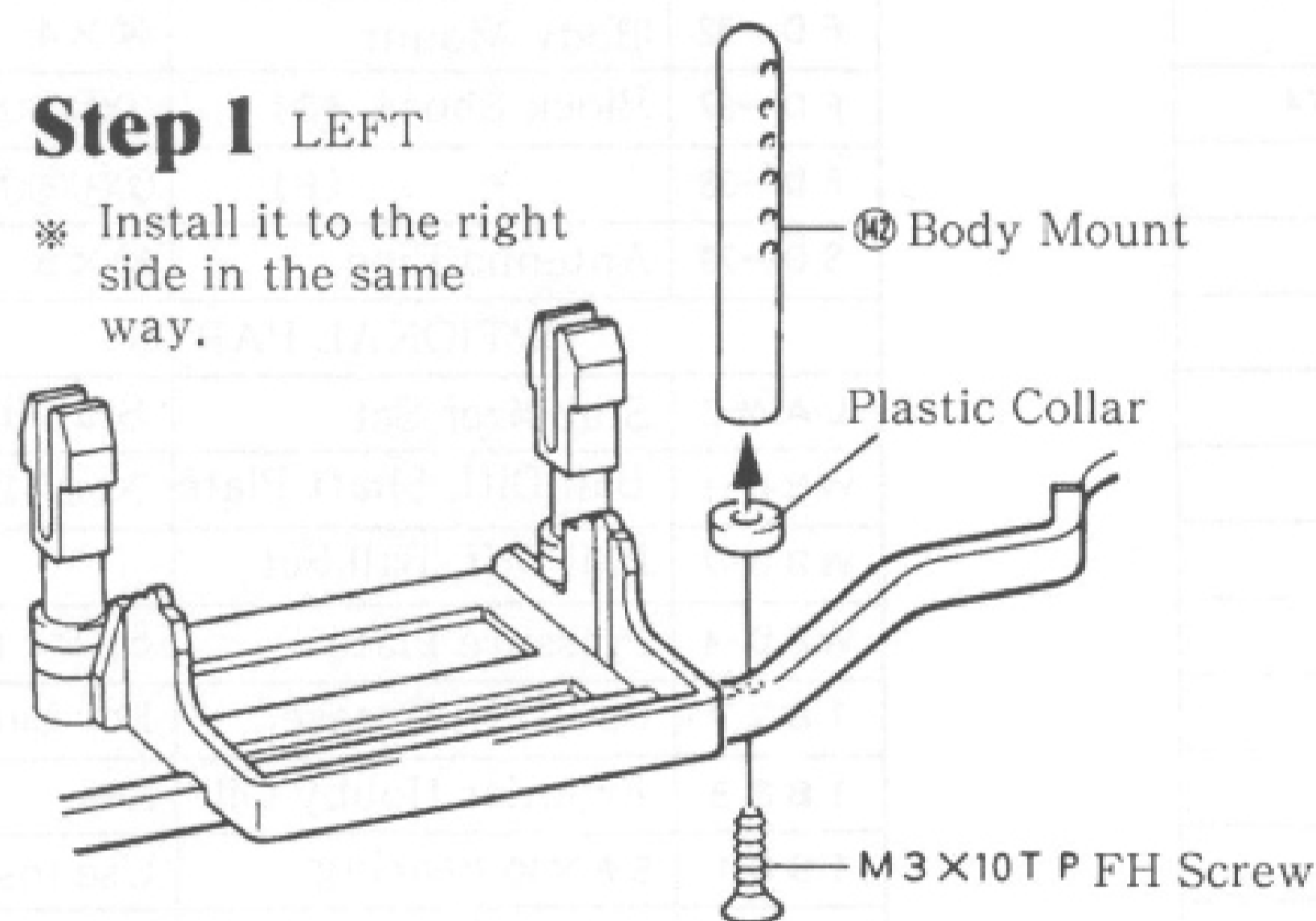
M3 X10T P FH Screw · 2

Plastic Collar ..... 2  
(13 On Shock Piston )

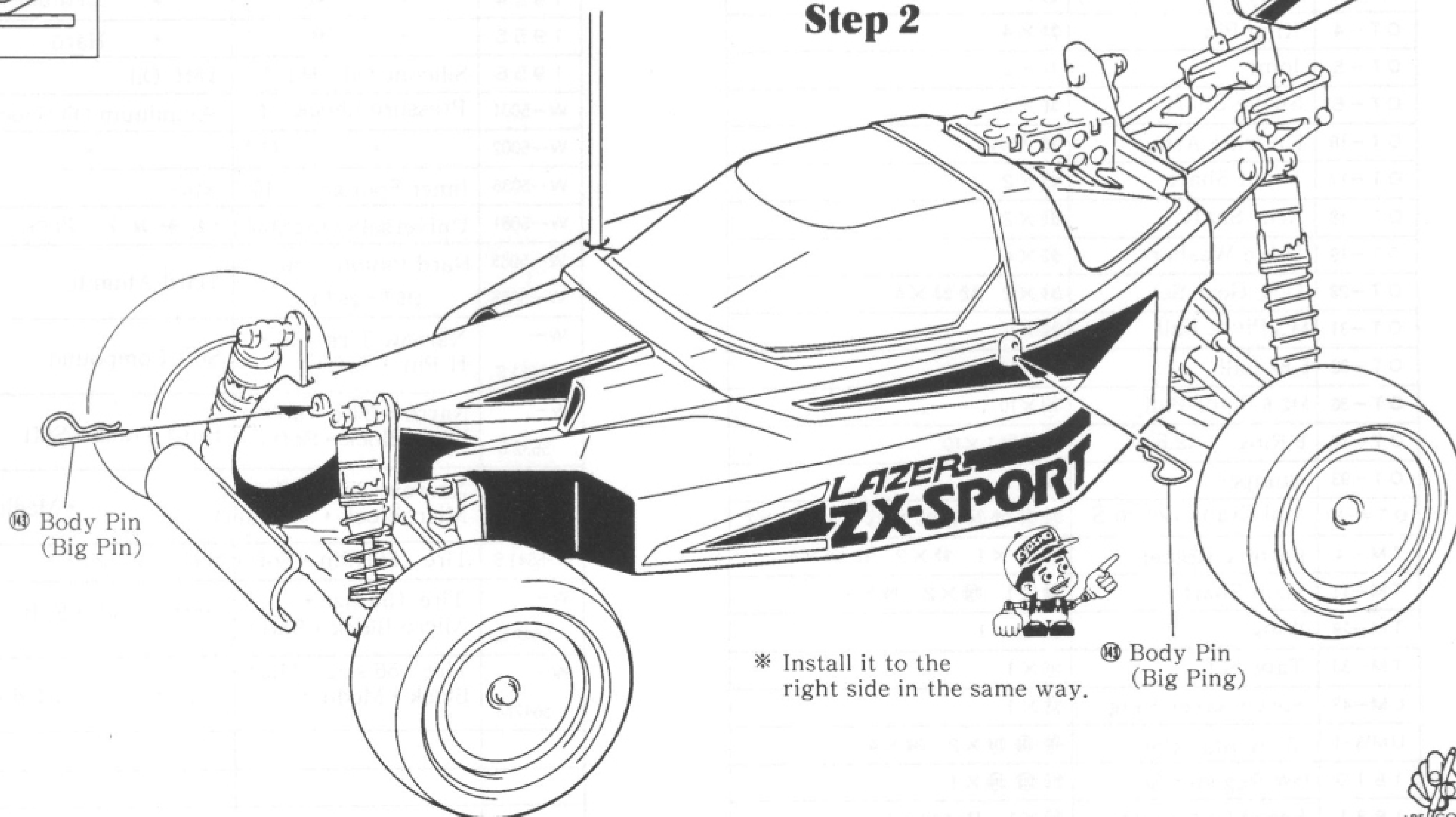
14 Body Pin ..... 3

14 Hook Pin ..... 2

14 Body Pin (Big Pin)



### Step 2





## PURCHASABLE PARTS FOR YOUR KIT

You can purchase replacement and optional parts for your kit. All of the part 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 Parts Pack Number. For example, if you need a Spur Gear (key no. 55) ask your dealer for Kyosho Parts Pack LA-2 (Spur Gear).

No.	Parts Name	Key number & Q'ty
LA-1	Diff. Case	50 51 X 1 Pully Flange for Ball Diff. x1
LA-2	Spur Gear	55 X 1
LA-10	Belt Roller Set	59 X 1 67 X 3 66 X 4
LA-12	Rear Drive Belt	63 X 1
LA-13	Front Drive Belt	64 X 1
LA-14	Shock Stay	63 65 X 1
LA-17	Plate Set	60 X 1
LA-18	Motor Plate	57 X 1
LA-19	Mount Plate	56 X 1
LA-20	Sus. Shaft Set	29 29 X 2 27 X 4
LA-21	King Pin (L)	24 X 4
LA-22	Steering Pin	42 43 X 2
LA-23	Saver Shaft Set	39 X 2
LA-24	Rod Set	16 X 3 17 X 2
LA-26	Sus. Arm Set	10 10 X 2
LA-27	Front Hub Carrier	87 X 2
LA-28	Rear Hub Carrier	85 86 X 1
LA-29	Upper Rod End Set	93 X 1 94 95 97 98 X 2 96 X 4
LA-30	Arm Bracket Set	88 89 90 91 92 X 1
LA-31	Upper Deck Mount	100 100 106 106 107 X 1
LA-32	Front Axle Box	44 45 X 1
LA-33	Rear Axle Box	46 47 48 49 X 1
LA-35	Gear Cover	58 X 1
LA-43	5.8φ Ball End	18 X 12
LA-44	Speed Control Rod	19 32 40 X 1
LA-45	Drive Hub Pully Set	61 62 X 1 63 X 2
LA-46	Upper Deck Kelron	100 100 X 1
LA-47	Main Chassis Kelron	100 X 1
LA-48	Controller Mount	60 X 1
LA-50	Decal (LazerSport)	107 X 1
LA-51	Screw Set ( * )	Screw, Nut, Wrench
LA-52	Body ( * )	100 X 1
OT-4	King Pin	23 X 4
OT-5	Joint	41 X 2
OT-6	Swing Shaft	98 X 2
OT-16	Knuckle Arm	99 100 X 1
OT-17	Front Shaft	20 X 2
OT-18	Rear Shaft	21 X 2
OT-19	Drive Washer	22 X 4
OT-28	Diff. Gear Set	54 X 2 52 53 X 4
OT-31	M3 Pivot Ball	26 X 10
OT-32	5.8φ Ball	31 X 10
OT-36	M2.6 Pivot Ball	25 X 10
OT-39	E Ring (E2.5)	14 (15) X 10
OT-93	Bumper	100 X 1
OTW-10	Uni Crank Servo S.	70 71 72 73 75 76 77 78 79 X 1 74 X 2
TM-4	Battery Holder	80 81 X 1 82 X 2 83 84 X 4
TM-11	Main Shaft	68 X 1 100 X 2 103 X 3
TM-28	Wing	104 104 X 1
TM-30	Tape Set	104 X 1
UM-43	Servo Saver Ring	53 X 1
UMW-1	Wing Stay Set	107 108 109 X 2 106 X 4
1819	15W Register Set	102 103 104 X 1
1831	Speed Controller	100 X 1 (Rotary)

No.	Parts Name	Key number & Q'ty
1840	Double Sided Tape	106 X 1
1878	Screw Locking	109 2PCS. (Compound)
1889	Body Pin	109 X 5
1911	8φ X 14 Bearing	69 X 2
1915	5φ X 8 Bushing	36 X 10
1916	5φ X 10 Bushing	37 X 10
1918	8φ X 14 Bushing	103 100 X 10
1943	Cross Wrench	120 X 1
W-5026	Narrow Wheel (56)	100 X 2
W-5027	Wheel (56 size)	104 X 2
W-5631M	Narrow Tire (56 • Medium • H Pin)	103 X 2
W-5641M	Tire (56 size • Medium • H Pin)	103 X 2
BB-26	Motor code	105 X 1
EF-37	Strap (S)	107 X 6
EP-22	Hook Pin	104 X 5
FD-32	Body Mount	102 X 4
FD-37	Block Shock (S)	1 3 5 7 8 9 10 11 12 13 X 2 14 X 4
FD-38	Block Shock (L)	2 4 6 7 8 9 10 11 12 13 X 2 14 X 4
SD-79	Antenna Pipe	110 X 5
OPTIONAL PARTS		
LAW-2	Stabilizer Set	Stabilize the roll over
WBD-1	Ball Diff. Shaft Plate	Need 2 sets for front & rear
WBD-2	Ball Diff. Ball Set	*
WBD-4	Pressure Plate	Spare parts for ball diff. 2pcs.
1877	Ball Diff. Grease	For ball (ball diff.)
1883	Frontier Hobby Oil	30cc
1901	5φ X 10 Bearing	Use instead of 57, 4 set
1902	5φ X 8 Bearing	Use instead of 36, 2 set
1951	Shock Oil (S•M•H)	Soft Medium Hard 3pcs.
1953	Silicone Oil (S)	Viscosity Soft
1954	Silicone Oil (M)	* Medium
1955	Silicone Oil (H)	* Hard
1956	Silicone Oil (Hard)	Diff. Oil
W-5001	Pressure Shock (S)	Aluminum Oil Shock
W-5002	Pressure Shock (L)	*
W-5036	Inner Sponge 1/10	2pcs.
W-5061	Universal Swing Shaft	(20 + 36.) 2pcs.
W-5085	Hard Pinion Gear (15T~25T)	Hard Alumite
W-5095		
W-5631S	Narrow Tire (56 • H Pin • Soft)	Soft Compound
W-5632S	Narrow Tire (56 • MicroBlock • Soft)	Hard Track • Soft
W-5632M	Narrow Tire (56 • MicroBlock • Medium)	* • Medium
W-5641S	Tire (56HPin • Soft)	Soft Compound
W-5642S	Tire (56 size • Micro Block • Soft)	Hard Track • Soft
W-5642M	Tire (56 size • Micro Block • Medium)	* • Medium