

RADIO CONTROLLED ELECTRIC POWERED RACING BUGGY

OFF-ROAD RACER

TRIUMPH

- DESIGNED TO BE THE NEW 1/10-SCALE 2WD BUGGY WORLD CHAMPION.
- OPTIMUM GEOMETRY, ADJUSTABLE, ALL-INDEPENDENT SUSPENSION WITH NEW-DESIGN OIL-FILLED PRESSURE TYPE SHOCK ABSORBERS.
- DRIVE TRAIN INCORPORATES THE LATEST TECHNOLOGY: LIGHT, EFFICIENT BELT DRIVE, SEALED GEARBOX WITH LOW-LOSS FINE-PITCH GEARS SLIP CLUTCH THAT PREVENTS MOTOR BURNOUT IF WHEELS STALL, ETC.
- STRONG, RIGID FRP CHASSIS FOR TOP HANDLING.
- FULL SET OF 12 BALL BEARINGS FOR MINIMUM FRICTION.
- NiCd BATTERY, MOTOR, 2 CHANNEL RADIO (NOT INCLUDED)

1:10 SCALE



KIT No.4301

SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

BEFORE YOU BEGIN ASSEMBLY!

Thank you for purchasing the Kyosho's R/C "EP Racing Buggy TRIUMPH".

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

《KIT FUTURES》

- Adjustable frontend angle. The caster angles can be adjustable with optional parts. (Not included)
● A newly designed size "M" shocks on front.
● It has longer front suspension arms than model ULTIMA.
● FRP shock arms are used for front and rear suspensions.
● Newly designed transmission. A belt drive and slipper clutch are used.
● Fine pitch gear is used.
● Size 56 rear and size 54 front, tire and wheels are used.
● Comes with ball differential, Uni-crank servo and special designed rod.
● Newly designed shocks.

BEFORE YOU BEGIN ASSEMBLY..... 2
BEFORE ASSEMBLY 3
LIST OF BAGGED PARTS (1) 4
LIST OF BAGGED PARTS (2) 5
DRAWING OF PLASTIC PARTS ON RUNNERS.
● ASSEMBLY OF CHASSIS PORTION 1 ~ 29
1 FILLING THE OIL SHOCK 7
SCREW IN THE BALL-END 7
3 ASSEMBLY OF GEAR COVER 8
4 CHECK THE BALL DIFF 8
5 ASSEMBLY OF MAIN SHAFT 8
6 ASSEMBLY OF AXLE BOX 9
7 INSTALLATION OF AXLE BOX 9
8 INSTALLATION OF MOTOR GUARD & MAIN GEAR 10
9 ASSEMBLY OF REAR SUS. ARM 10
10 ASSEMBLY OF FRONT HUB 11
11 ASSEMBLY OF FRONT BULK HEAD 11
12 INSTALLATION OF FRONT UPPER ROD & SUS. ARM 11
13 ASSEMBLY OF UNI-CRANK 12
14 ASSEMBLY OF SERVO SAVER 12
15 CHECK THE RADIO SYSTEM 12
16 INSTALLATION OF SERVO SAVER 13
17 ASSEMBLY OF FRONT PART 13
18 ASSEMBLY OF WING STAY 13
19 INSTALLATION OF REAR SHOCK STAY 14
20 ASSEMBLY OF REAR PART 14
21 INSTALLATION OF MOTOR CODE 15
22 INSTALLATION OF MOTOR & GEAR COVER 15
23 INSTALLATION OF BATTERY HOLDER 15
24 INSTALLATION OF UPPER DECK 16
25 INSTALLATION OF R/C RADIO UNIT 16
26 INSTALLATION OF SHOCK 16
27 INSTALLATION OF BATTERY 17
28 ASSEMBLY OF TIRE & WHEEL 17
29 INSTALLATION OF TIRE 18
● CUTTING & MOUNTING BODY 30 ~ 33
30 CUTTING BODY AND WING 18
31 PAINTING 18
32 APPLY OF DECAL, ASSEMBLY OF WING 19
33 INSTALLATION OF BODY & WING 19
ADJUSTMENT OF BALL DEFERENTIAL 20
SETTING GUIDE (1) 20
(2) 21
EXPLODED VIEW(front,shock,ball diff) 22
(rear,chassis) 23
() 24
PURCHASABLE PARTS FOR YOUR KIT 25

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 "List of Bagged Parts" (page 4,5).

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 starting of the assembly.

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

○ LEARN THE MARKS DESCRIBED IN THE INSTRUCTION.

LOCKTITE ... Place to put some locktite.

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

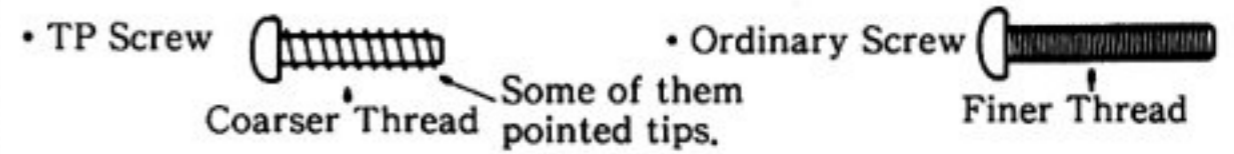
GREASE ... Point where grease should be applied.

* It will reduce friction and assure smooth movement.

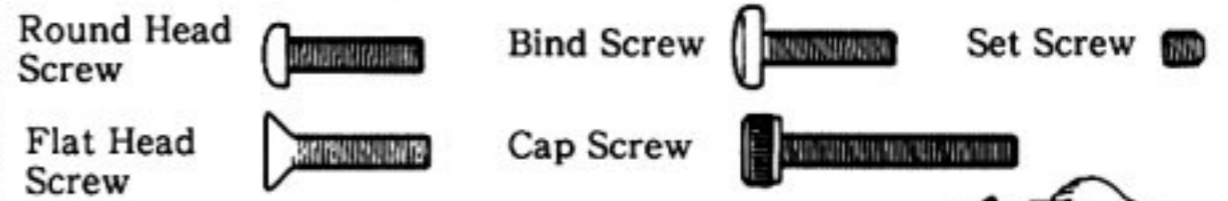


○ BE WELL AWARE OF THE DIFFERENT TYPES OF SCREWS.

1. The difference between the TP Screw and the ordinary screw is...



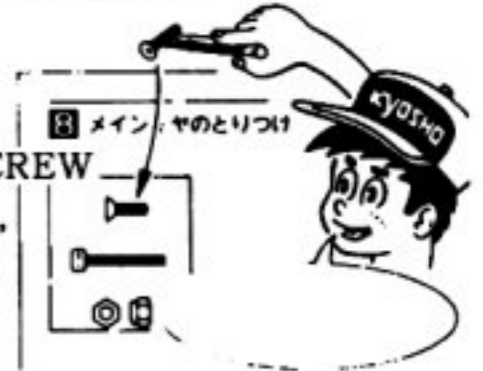
2. The kinds of screws which will be used in this instruction.



* 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 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.

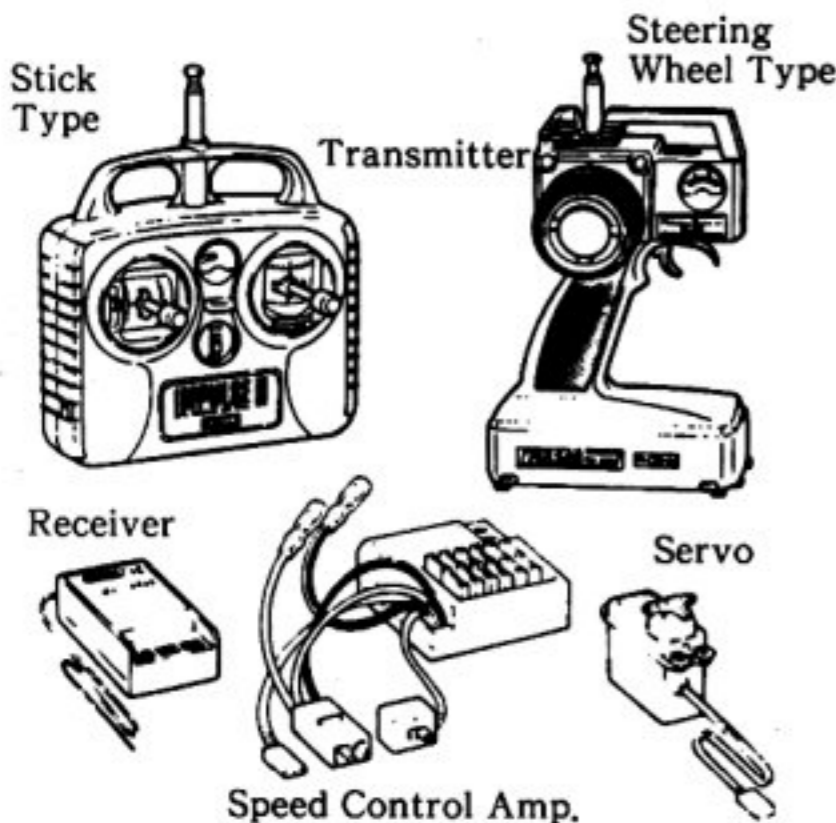
Over tighten may strip the thread in the plastic.



THINGS NEEDED BESIDES THE KIT

< 2 Channel Radio System >

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



AA Size Battery for Transmitter
8 pcs.

< NiCd Battery >

This car is designed to use a rechargeable 7.2V NiCd Battery Pack.

No.2331 7.2V - 1200 SCR Battery (Saddle Pack)

No.2348 7.2V - 1700 SCR Battery



< Motor >

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

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



< Charger for NiCd Battery >

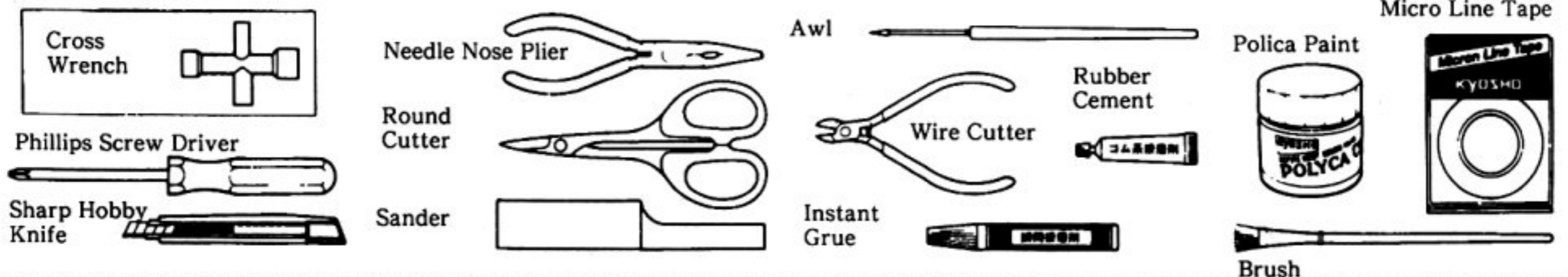
The Kyosho's NiCd battery is high performance.

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
No.2221	Super NiCd Charger (AC100V)	14 16 (H)	100%	For beginner
No.2326	7.2V Power Charger (DC12V)	15 (min)	70%	For beginner, Built-in timer
No.1849	Multi Charger II (DC12V)	20 (min)	100%	For beginner, Built-in timer
No.2246	FET Auto Charger (DC12V)	20 30 (min)	100%	Trickle charging Automatic cut-off
No.2232	Super NiCd AC Quick Charger (AC100V)	40 (min)	80%	Chargeable from household outlet, Built-in timer

< Tools Required >

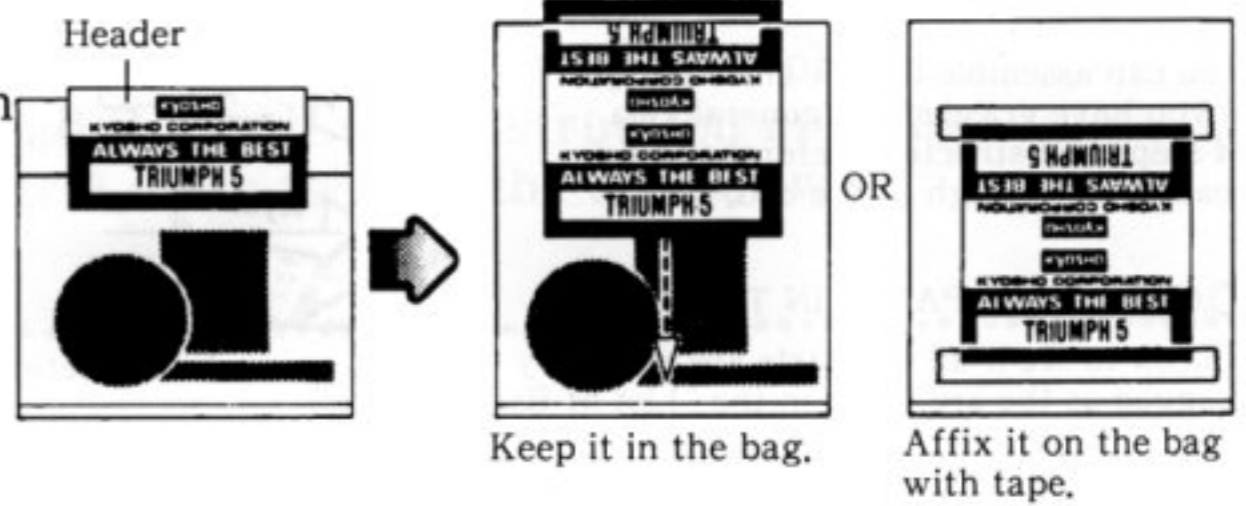
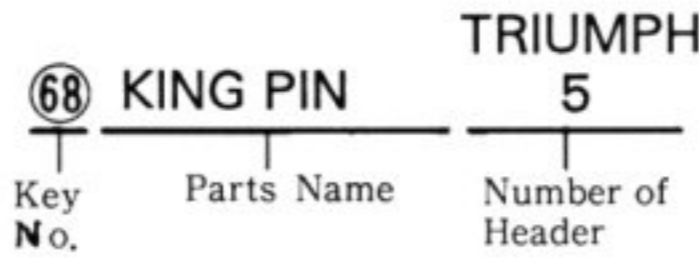


LIST OF BAGGED PARTS (1) The key number with ★ indicated plastic parts on a runner. See page 6 for the layout drawing.

<DO NOT THROW AWAY A BAG HEADER>

*The header is the only things to rely upon when looking for a part. Don't discard it until you finish the assembly.

*The header is indicated like this in the instruction.



Bag	Key #	Parts Name	Q'ty	Step	
TRIUMPH -1	● 1	Front Shock Case	2		
	● 2	Rear Shock Case	2		
	● 3	Front Shock Shaft	2		
	● 4	Rear Shock Shaft	2		
	● 5	Front Shock Spring	2		
	● 6	Rear Shock Spring	2		
	● 7	Spring Holder	4		
	● 8	Shock Cap	4		
	● 9	Spring Stopper	4	● This mark is assembled for pressure shock.	
	● 10	Shock End	4		
	● 11	Shock Piston	4		
	● 12	Shock Collar (white)	4	1	
	● 13	Shock Collar (black)	4		
	● 14	O Ring	8		
	● 15	C Ring	4		
	● 16	E Ring (E2.5)	8		
		17	Shock Oil (green)	1	
		18	Pressure Top	4	
		M3X18 Cap Screw	4	11 19	
TRIUMPH -3	19	φ 5.8: Ball End	16	2 sparex2	
	20	φ 5.8: Ball (silver)	10	1 2	
	21	φ 5.8: Ball (black)	8	2	
	22	Servo Saver Shaft	2	17	
	23	φ 3X50 Adjust Rod	4	2	
	24	φ 3X60	2	2	
	25	Upper Deck Post	4	24	
	26	Servo Saver Spring	1	14	
	27	Steering Pin	2	13	
	28	Steering Plate	1	13	
	29	φ 3Xφ 6 Bushing	2	13	
	30	φ 5Xφ 8 Bushing	4	13	
TRIUMPH -4	◎ 31	φ 8Xφ 14 Bearing	4	8	
	◎ 32	Differential	1	2pcs. are assembled for ball diff	
	◎ 33	Diff. Shaft (A)	1		
	◎ 34	Diff. Shaft (B)	1		
	◎ 35	Plate Holder	2		
	◎ 36	Pressure Plate	2	◎ This mark is assembled for ball diff.	
	◎ 37	Torque Keeper (M2.6X15 Cap Screw)	1		
	◎ 38	Tapered Washer	4	6	
	◎ 39	Diff. Ball	10		
	◎ 40	Thrust Ball	8		
	◎ 41	Thrust Washer	2		
	◎ 42	Holder Ring	1		
	43	Needle Roller Shaft	1	6	

Bag	Key #	Parts Name	Q'ty	Step
TRIUMPH -4	44	Motor Guard Joint	1	6
	45	Limmiter Collar	1	5
	46	Axle Box (L)	1	6
	47	Axle Box (R)	1	6
	48	Motor Plate	1	3 6
	49	Side Plate	1	6
	50	Gear Cover	1	3
	51	Drive Pulley	1	6
	★ 52	Pulley Flange	1	6
	★ 53	Collar	2	6 sparex1
	54	Slipper Plate	2	5
	55	Drive Hub	1	5
	56	Main Shaft	1	5
	57	Guide Plate	1	5
TRIUMPH -5	58	Motor Gard	1	8
	59	Belt	2	6
	60	Needle Roller	2	6
	61	φ 4 X φ 8 Bushing	1	5
	62	Spar Gear	1	5
	63	Sponge Cap	1	4
	14	O Ring	1	4
	64	Rear Wheel Shaft	2	9
	65	Drive Washer	2	9
	66	Hub Pin	4	9 12
	67	Swing Shaft	2	20
	68	King Pin	2	10
	69	Front Sus. Shaft	2	12
	70	φ 3X50 Shaft	2	20
71	Front Wheel Shaft	2	10	
TRIUMPH -6	72	φ 4X26 Shaft	1	11
	73	φ 6.8 Ball	4	9
	74	φ 4Xφ 8 Bearing	4	29
	75	φ 5Xφ 10 Bearing	4	9
	★ 76	Servo Mount	4	16 sparex2
	★ 77	Body Hook	1	24
	★ 78	Antenna Post	1	23
	★ 79	Shock Collar	4	26
	★ 80	Uni-Crank (A)	1	13
	★ 81	Uni-Crank (B)	1	13
	★ 82	Uni-Crank (C)	1	13
	★ 83	Uni-Crank Collar (A)	2	24
	★ 84	Servo Saver	1	14
	★ 85	Saver Ring	1	14
★ 86	Saver Horn (SL)	1	14	
★ 87	Saver Horn (SS)	1	14	

LIST OF BAGGED PARTS (2)

Bag	Key #	Parts Name	Q'ty	Step
TRIUMPH -6 Plastic Parts	★ 88	Saver Hone (F)	1	14
	★ 89	Saver Washer	1	16
	★ 90	Wing Stay (A)	2	18
	★ 91	♦ (B)	2	18
	★ 92	♦ (C)	2	18
	★ 93	Wing Washer	4	23 sparex2
	★ 94	Rear Hub (R)	1	9
	★ 95	♦ (L)	1	9
	★ 96	Front Bulk Head (A)	1	11
	★ 97	♦ (B)	1	11
	★ 98	Rear Bulk Head	1	19
	★ 99	Axle Stopper (A)	1	20
	★100	♦ (B)	1	8
	★101	Adjust Gauge (30°)	1	24
	★102	Adjust Plate	1	24
	★103	Front Sus. Arm	2	12
	★104	Rear Sus. Arm	2	9
	★105	Knuckle Arm (R)	1	10
	★106	♦ (L)	1	10
	★107	Front Hub (R)	1	10
	★108	♦ (L)	1	10
	★109	Bumper	1	17
	★110	Under Cover	1	7
	★111	Gear Cover Hutch	1	3
	★112	Battery Holder Case (A)	1	23
	★113	♦ (B)	1	23
★114	Stopper Plate	2	27	
★115	Stopper Post	4	23	
★116	Stopper Washer	4	23	
★149	Sus. Arm End	4	9	
TRIUMPH -7	117	Front Wheel (54 size)	2	28
	118	Rear Wheel (56 size)	2	28
TRIUMPH -8	119	Motor Spacer	1	22
	120	Double Sided Tape	1	25
	121	Double Sided Seal	1	7 32
	122	Pinion Gear (22T)	1	22
	123	Upper Deck	1	24
	124	Front Upper Plate	1	24
	125	Front Shock Stay	1	11
	126	Rear Shock Stay	1	19
	127	Nylon Strap	2	25
	128	Antenna Pipe	1	25
	129	Screw Locking Compound	1	
	130	Hobby Grease	1	
	131	Sponge Tape	1	25
		132	Front Tire	2
133		Rear Tire	2	28
134		Main Chassis	1	7 17
135		Body	1	30
136		Wing	1	30
137		Side Wing	1	30
138		Decal	1	32
139		Cross Wrench	1	

Bag	Key #	Parts Name	Q'ty	Step	
TRIUMPH -2 SCREW NUT WASHER OTHERS	16	E Ring (E2.5)	9	8 9 12	
	140	♦ (E3)	3	5 10	
	141	Hook Pin	3	33	
	142	Body Pin	1	33	
	143	Hex Wrench (1.5)	1	5	
	144	♦ (2)	1	4	
	145	♦ (2.5)	1	11 19	
	146	Wave Washer	3	5	
	147	φ 4 X φ 10 Shim	2	8	
	148	φ 5 X φ 8.5 Shim	4	9 29	
		RH Screw	M2 X 4	1	
		♦	M3 X 4	2	
		♦	M3 X 33	1	
		Bind Screw	M2.6 X 10	2	
		♦	M3 X 6	6	
		♦	M3 X 10	4	
		♦	M3 X 15	2	
		♦	M3 X 25	1	
		♦	M3 X 45	2	
		♦	M4 X 8	2	
		Flat Head Screw	M2.6 X 12	8	
		♦	M3 X 6	7	
		♦	M3 X 12	6	
		♦	M3 X 15	2	
		♦	M4 X 6	1	
		♦	M4 X 8	8	
	♦	M4 X 20	4		
	TP RH Screw	M3 X 18	1		
	TP Bind Screw	M2.6 X 12	5		
	♦	M3 X 8	13		
	♦	M3 X 10	3		
	TP FH Screw	M3 X 10	9		
	♦	M3 X 15	5		
	Set Screw	M3 X 3	2		
	♦	M3 X 10	5		
	Nut	M2.6	12		
	♦	M3	6		
	Nylon Nut	M2.6	2		
	♦	M3	5		
	♦	M4 (flange)	4		
	Washer	M2	1		
	♦	M2.6 (black)	2		
	♦	M3	1		
* There are extra screws as spare for assembly.					

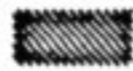
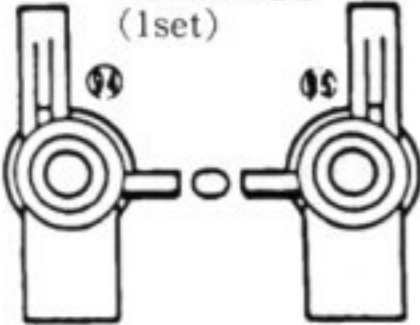
LAYOUT DRAWING OF PLASTIC PARTS ON RUNNERS

SHOCK PISTON
(4 sets)



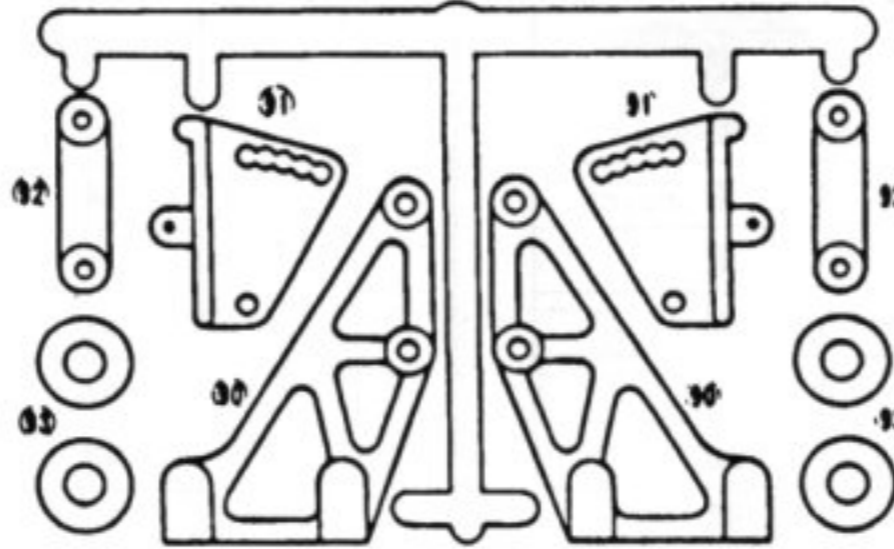
Use smaller 2pcs. in Step 12
and 1pc. in Step 24.
Use bigger 2pcs. in Step 17.

REAR HUB
(1set)

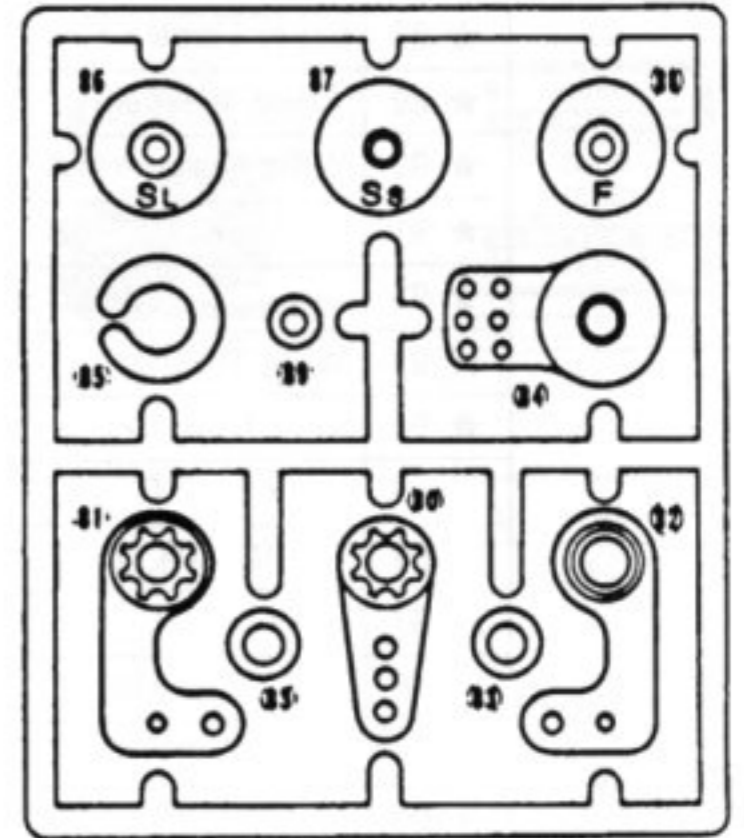


These parts are not used.

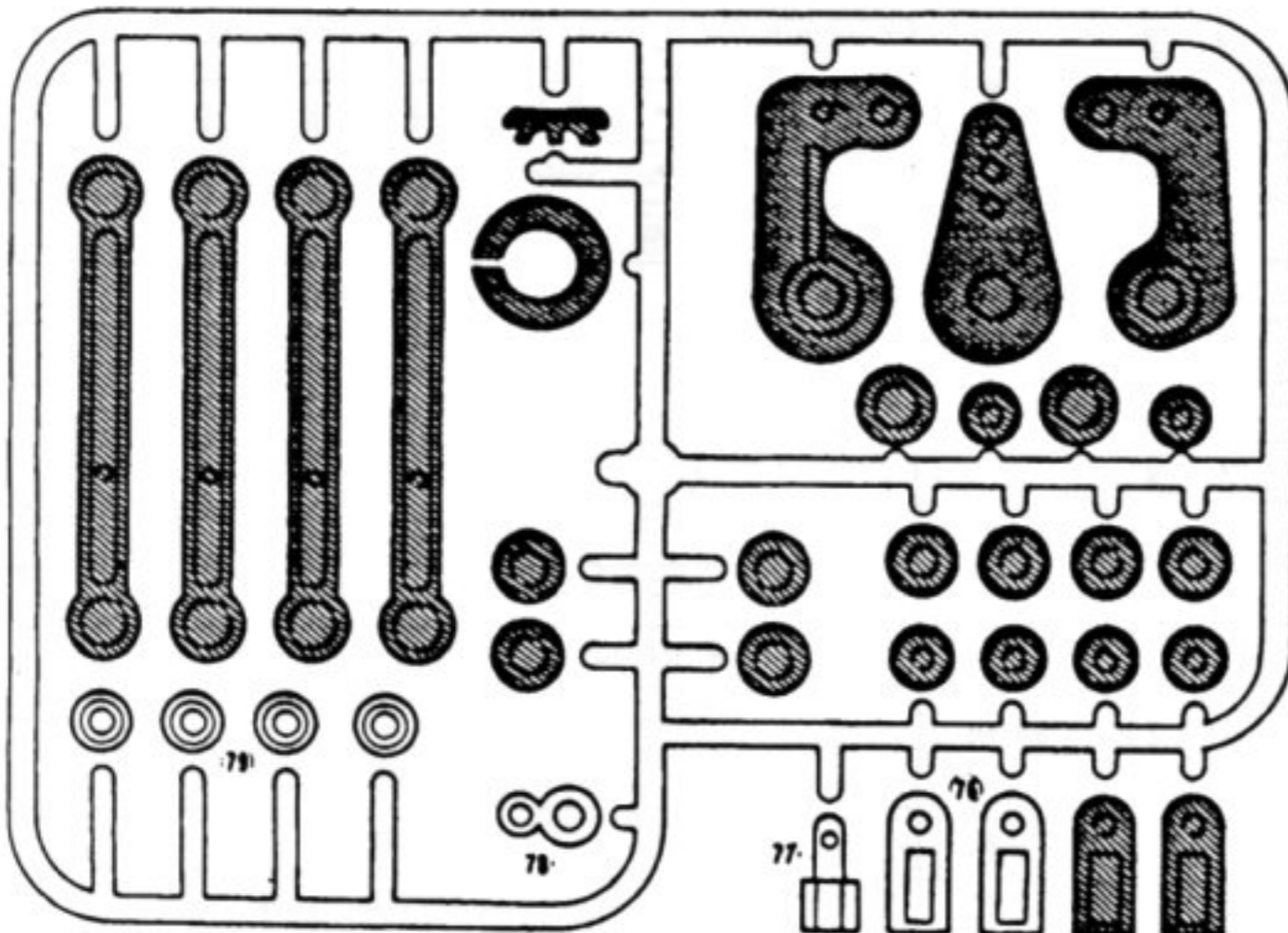
WING STAY PART (1set)



UNI-CRANK PART (1set)



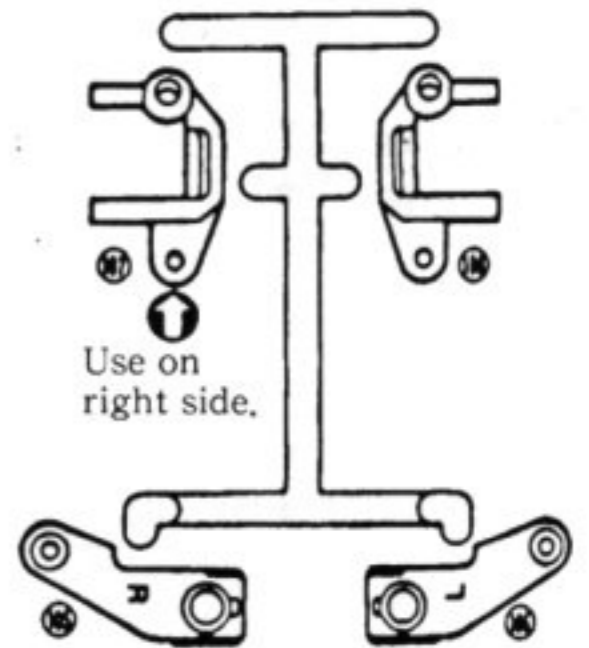
MOUNT PLASTIC PART (1set)



BULK HEAD PART
(1set)

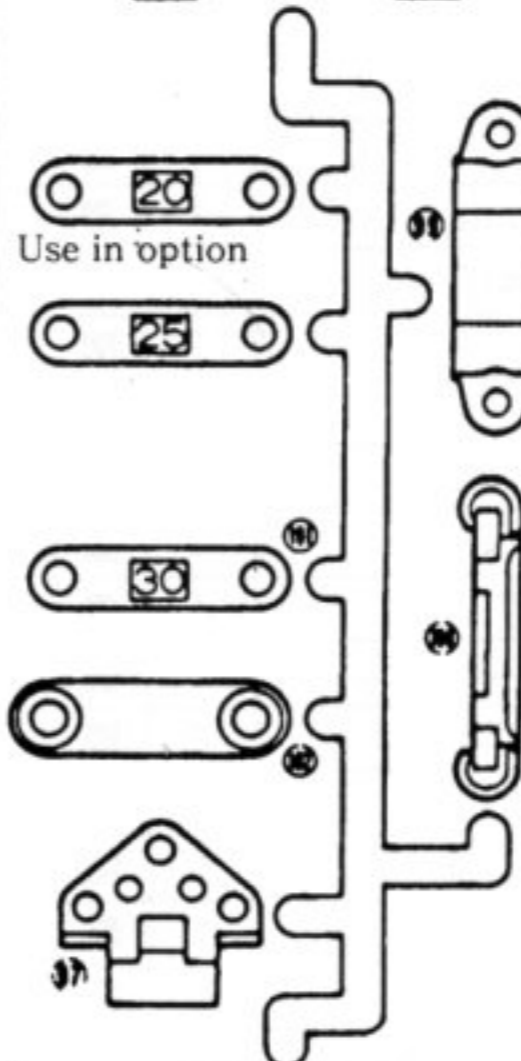


FRONT HUB PART
(1set)



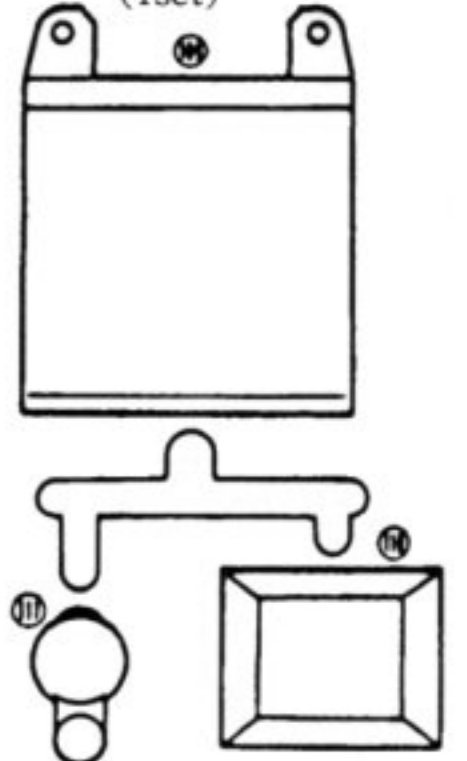
Use on
right side.

BULK HEAD PART
(1set)

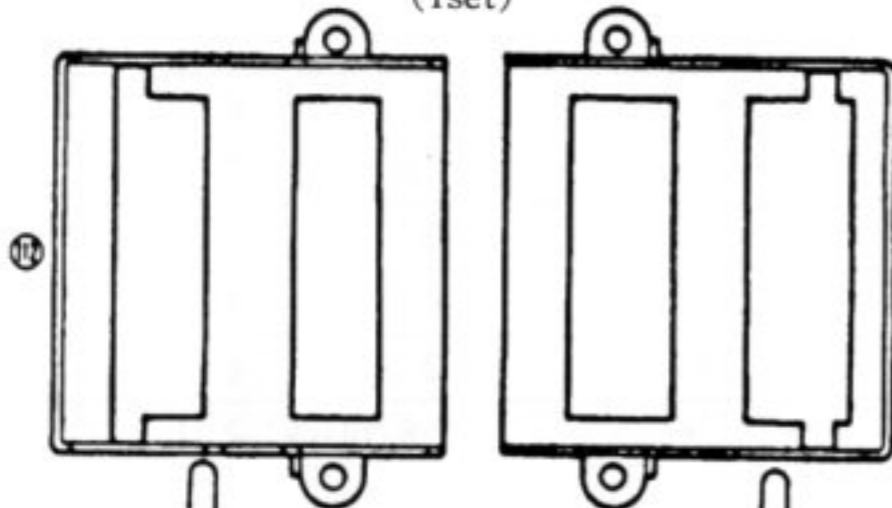


Use in option

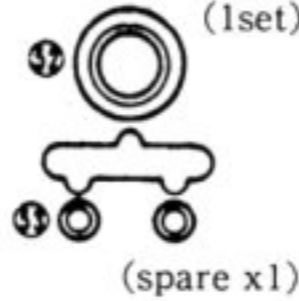
BUMPER & OTHER
(1set)



BATTERY HOLDER PART
(1set)

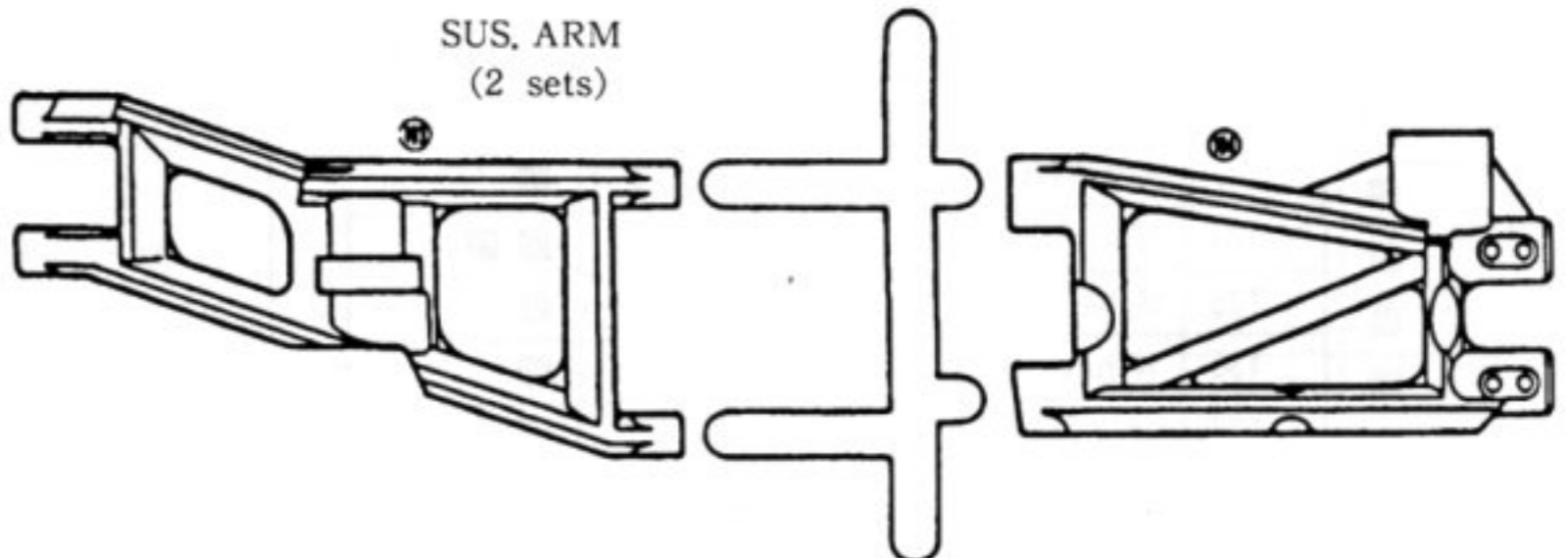


PULLEY FLANGE PART
(1set)



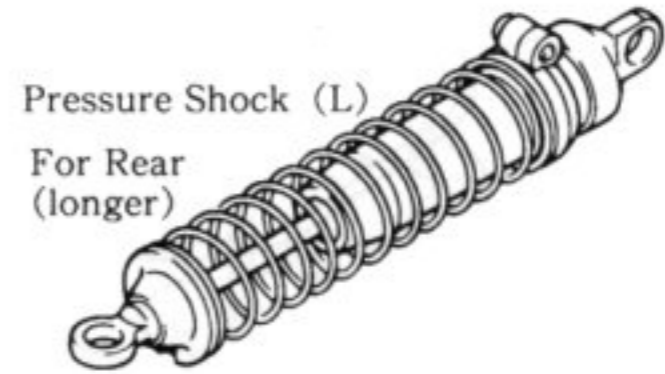
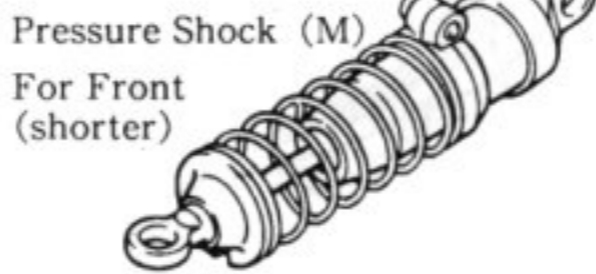
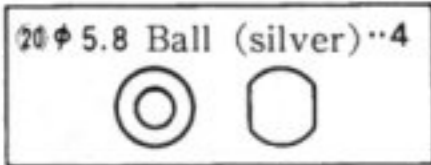
(spare x1)

SUS. ARM
(2 sets)



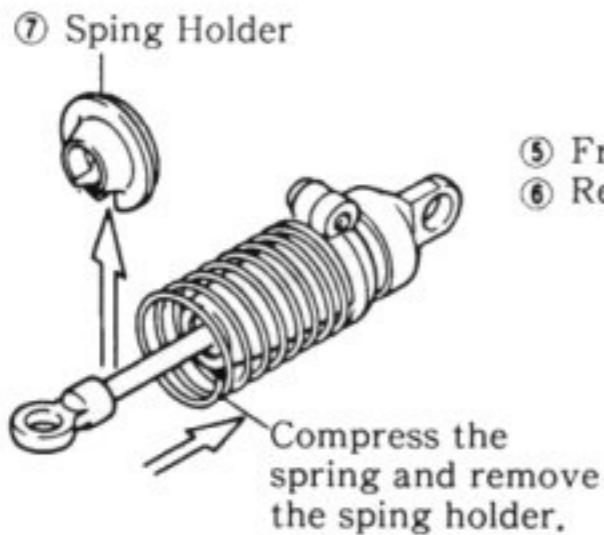
1 FILLING THE OIL SHOCK

*Shocks are assembled temporarily in bag #1, and must be disassembled only shock spring and shock cap to add oil.

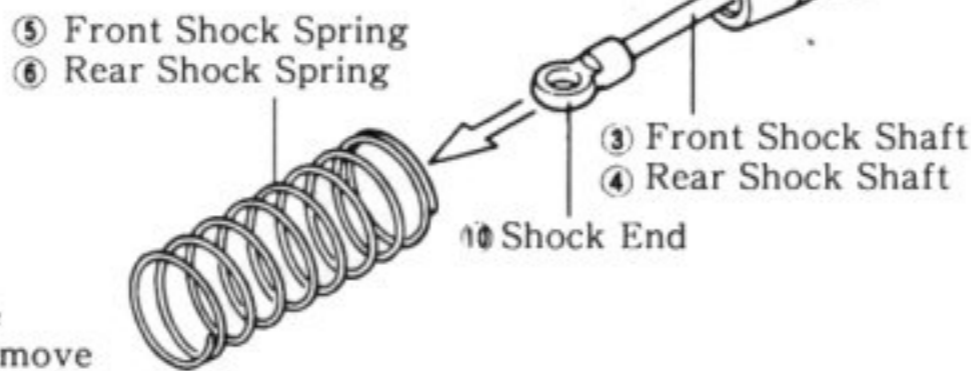


Disassemble spring and cap

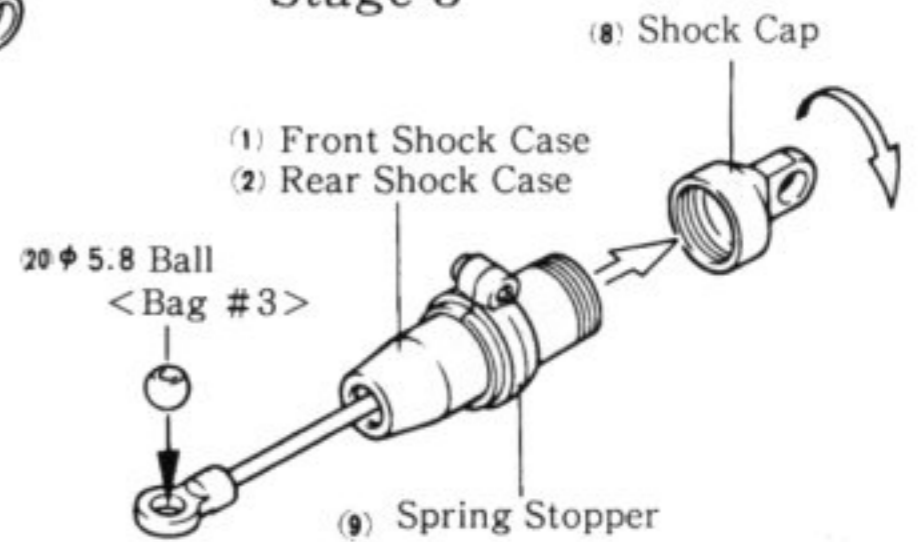
Stage 1



Stage 2



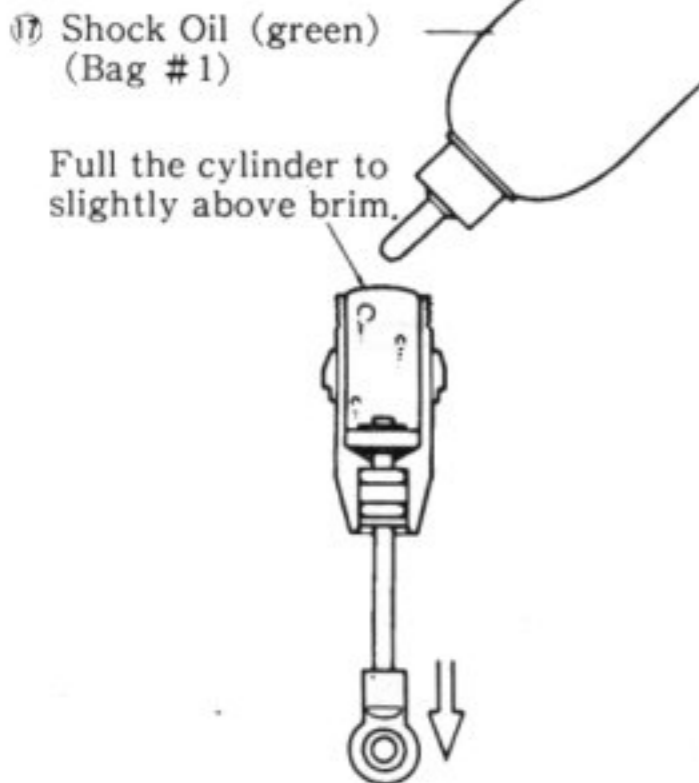
Stage 3



Filling the oil shock

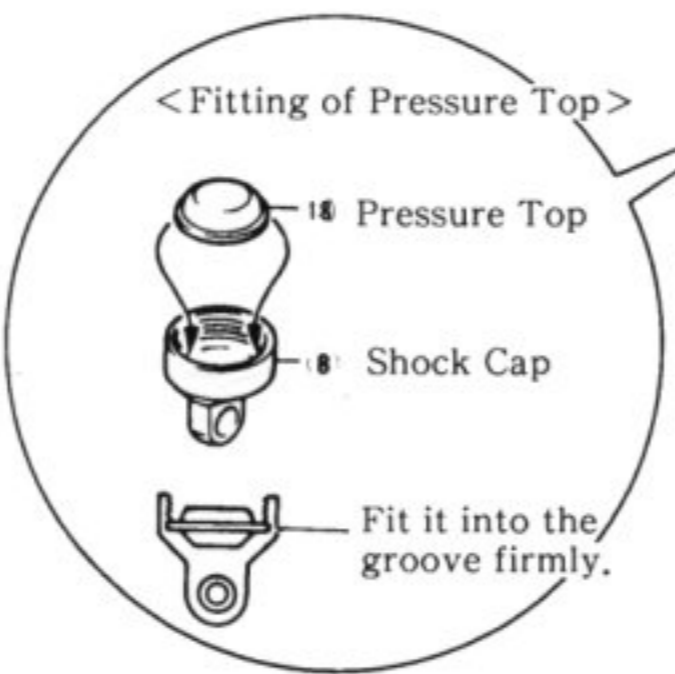
Stage 1

Pull down the piston to the bottom and pour oil showly. Then move the piston up and down gently to get rid of air bubbles.



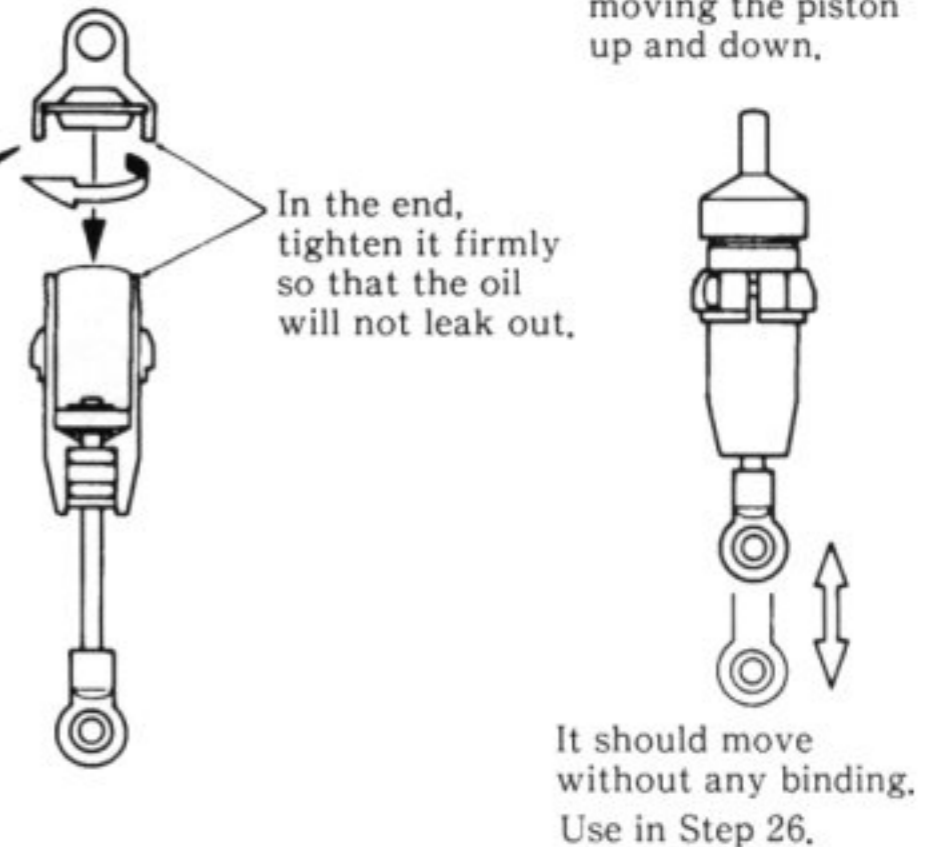
Stage 2

Keep the piston in the lowest position and tight half turn gradually, then excessive oil will run over.



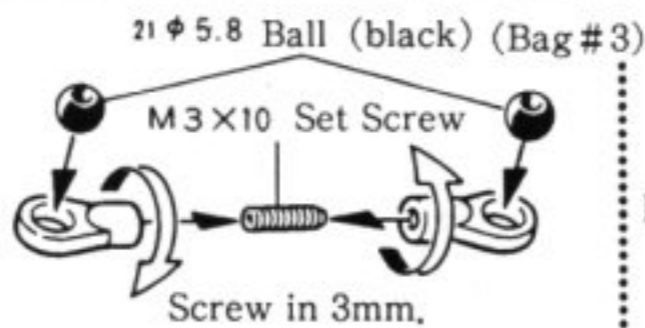
Stage 3

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

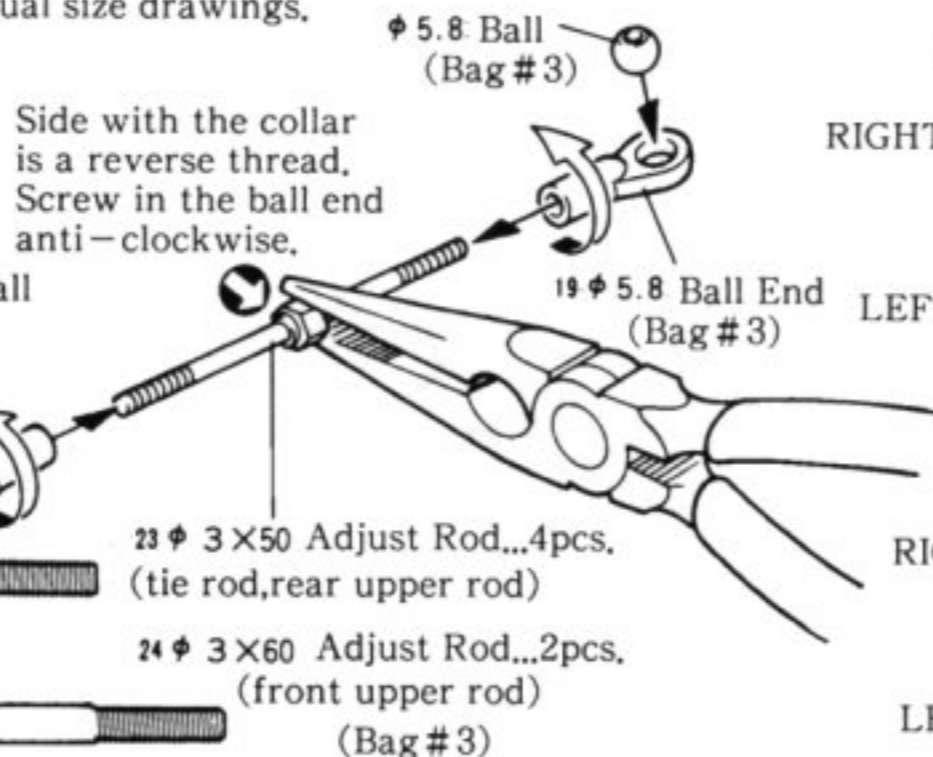


2 SCREW IN THE BALL-END

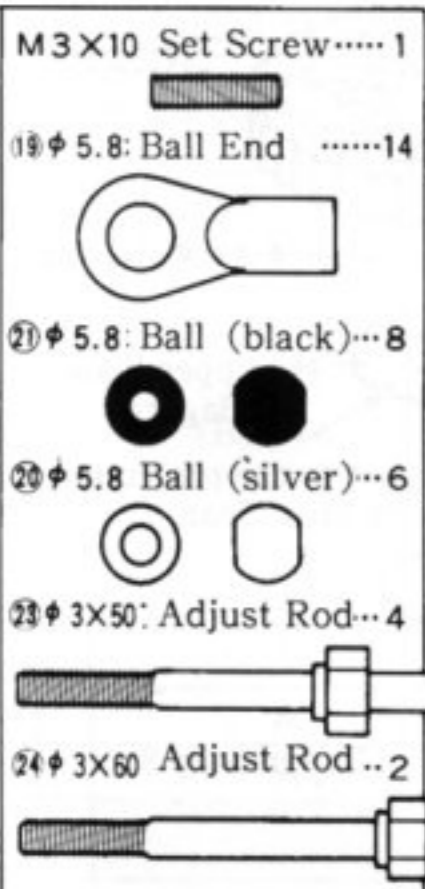
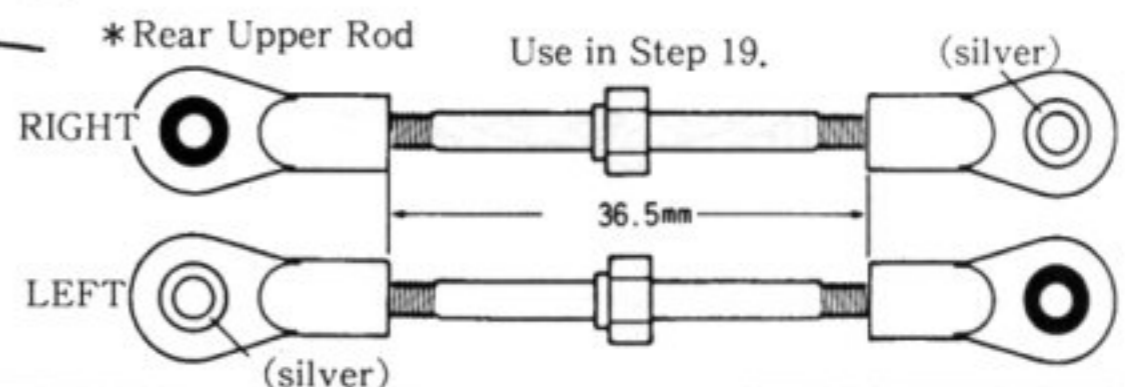
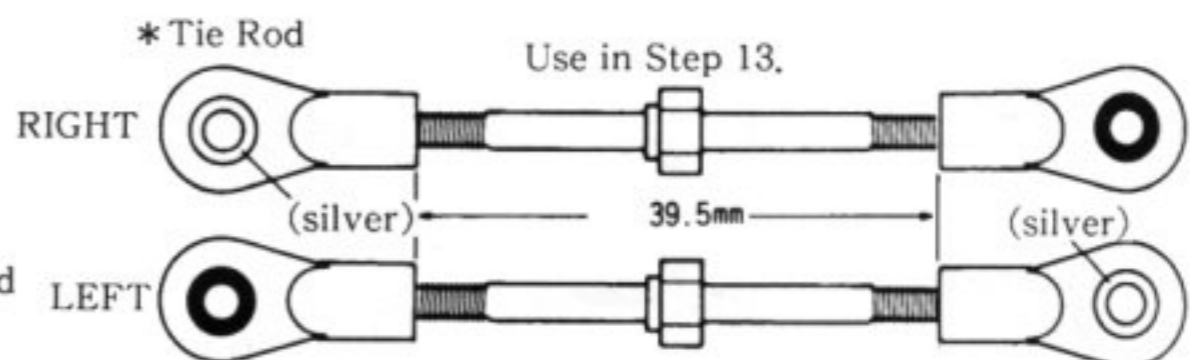
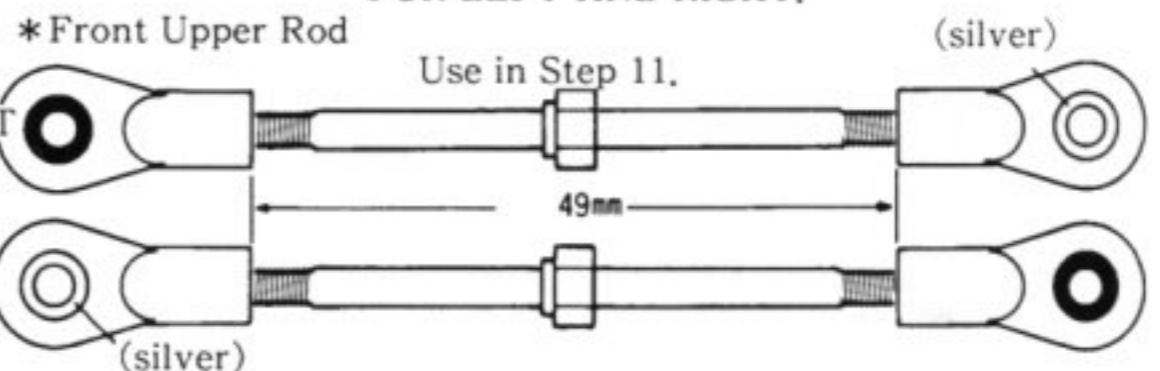
⑰ ϕ 5.8 Ball End (Bag #3)



*Screw in each ball ends matching to the actual size drawings.



<< Actual Size >> BALL COLOR IS REVERSED FOR LEFT AND RIGHT.



3 ASSEMBLY OF GEAR COVER

Stage 1

④ Motor Plate (Bag #4)

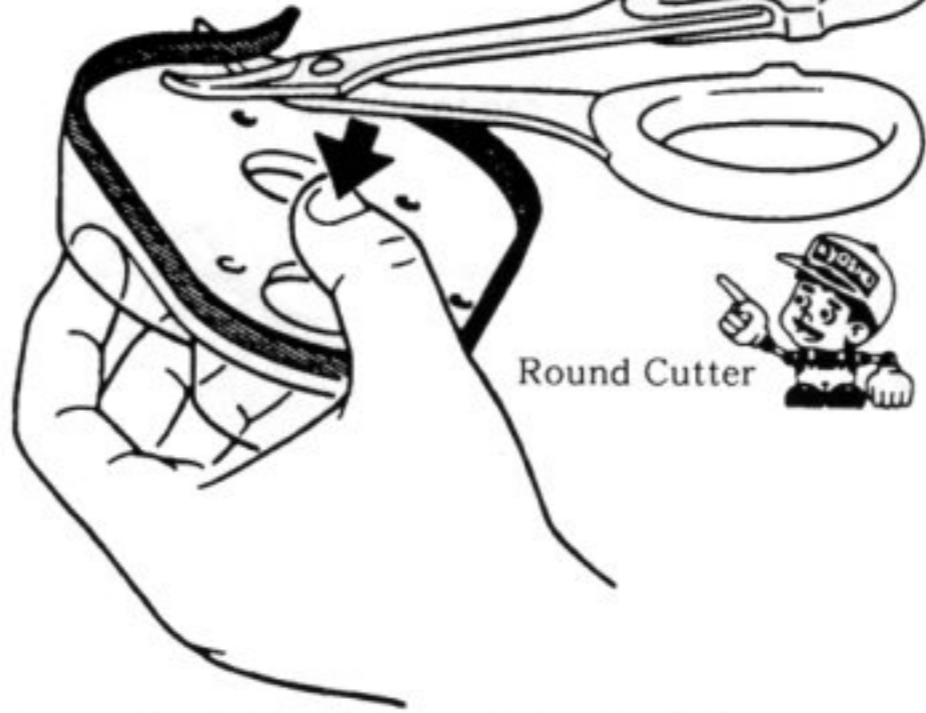
⑤ Gear Cover (Bag #4)

M2 X 4 RH Screw 1

M2 Washer 1

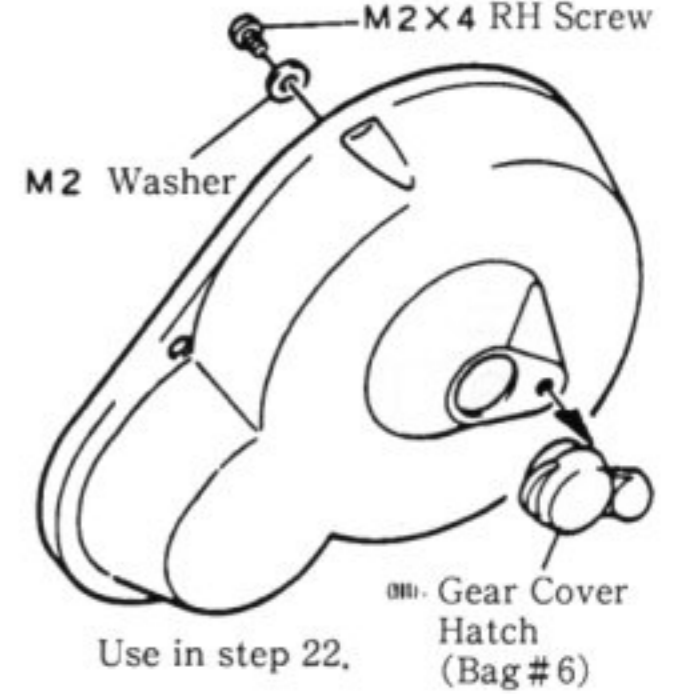


Stage 2



Round Cutter

Stage 3



⑥ Gear Cover Hatch (Bag #6)

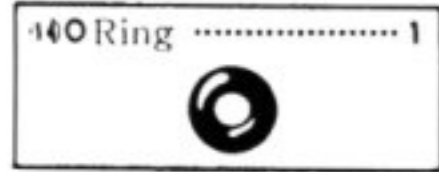
Use in step 22.

4 CHECK THE BALL DIFF.

Ball differential is already assembled and is included in Bag #4, but before assembling it into the gear box, check ① and ②

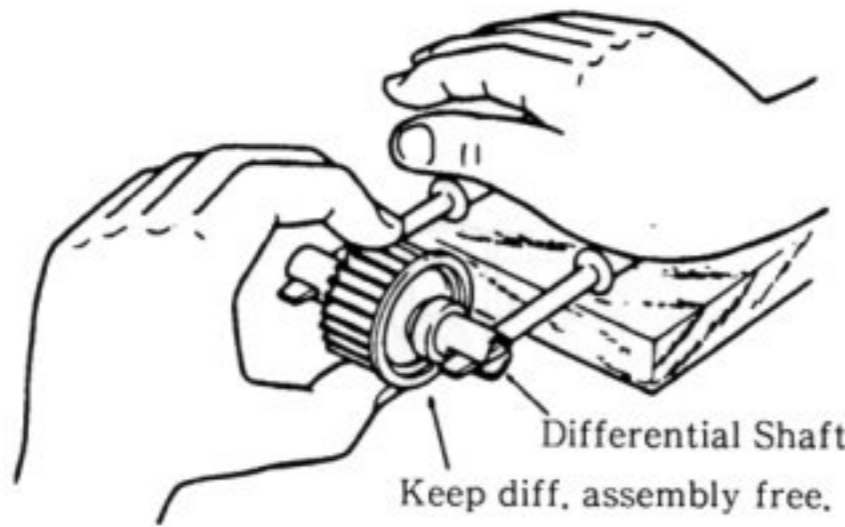
① DIFFERENTIAL ITSELF SHOULD NOT TURN FREELEY.

② DIFFERENTIAL MUST BE EFFECTIVE



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

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



Differential Shaft
Keep diff. assembly free.

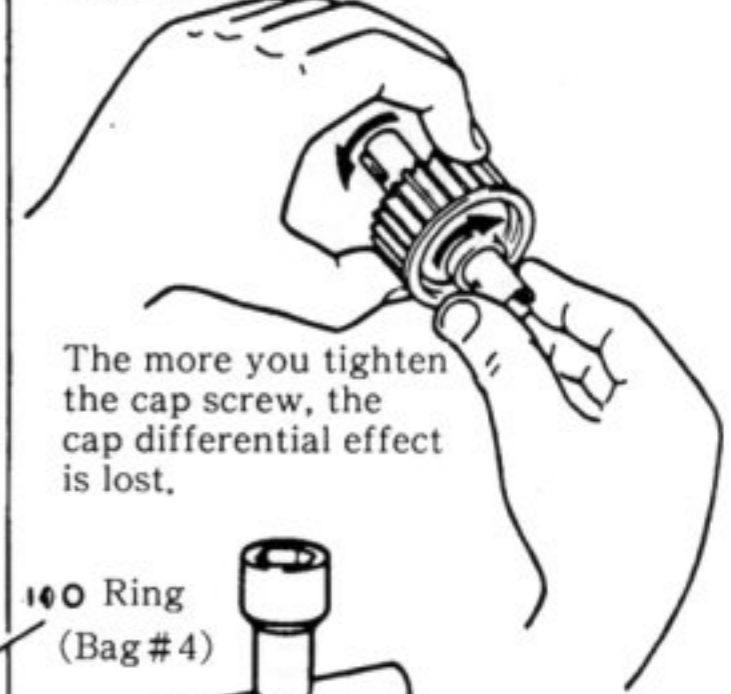
The point of adjustment is how tight the cap screw is tightened. Adjust and readjust ① and ② are OK.



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



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



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

5 ASSEMBLY OF MAIN SHAFT

④ 4 X 8 Bushing... 1

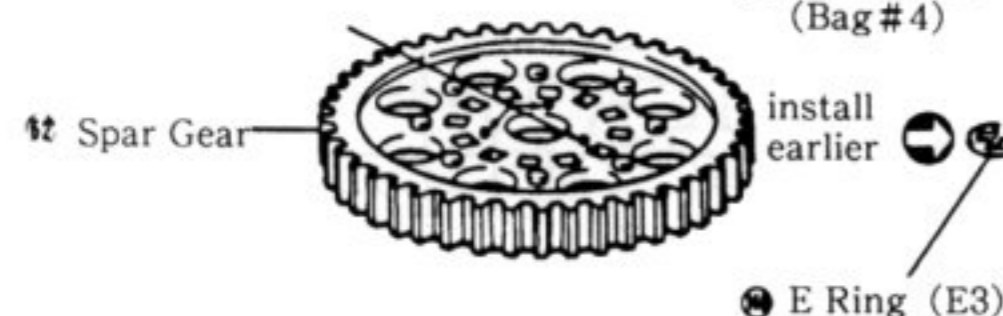
④ E Ring (E3) 1

M3 X 3 Set Screw 1

M3 Nylon Nut 1

Stage 1

Cut three projections off.

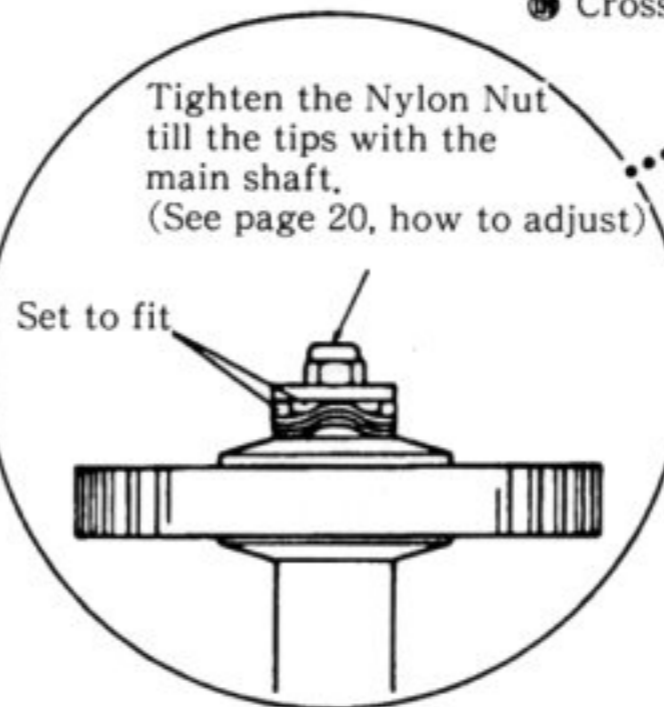


⑤ Drive Hub (Bag #4)

⑥ Main Shaft (Bag #4)

④ E Ring (E3)

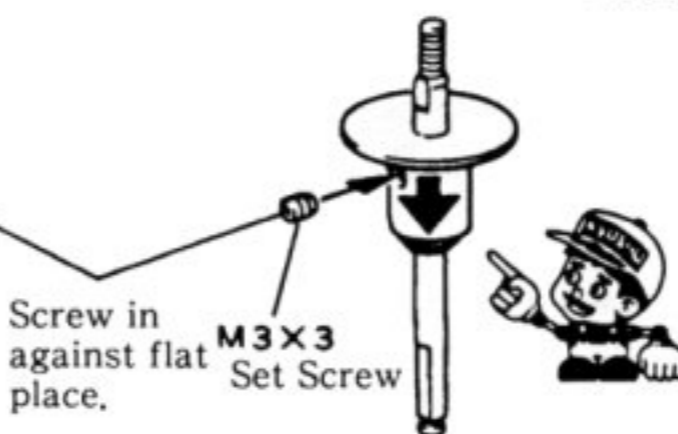
Stage 2



Tighten the Nylon Nut till the tips with the main shaft. (See page 20, how to adjust)

Set to fit

Stage 3



Screw in against flat place.

M3 X 3 Set Screw

⑤ Cross Wrench

M3 Nylon Nut

④ Limmiter Collar (Bag #4)

④ Wave Washer (Bag #2)

④ Guide Plate (Bag #4)

④ Slipper Plate (Bag #4)

Stage 4

Push it in spar gear earlier.

④ 4 X 8 Bushing

④ Slipper Plate (Bag #4)

Set in the projection of Spar Gear.

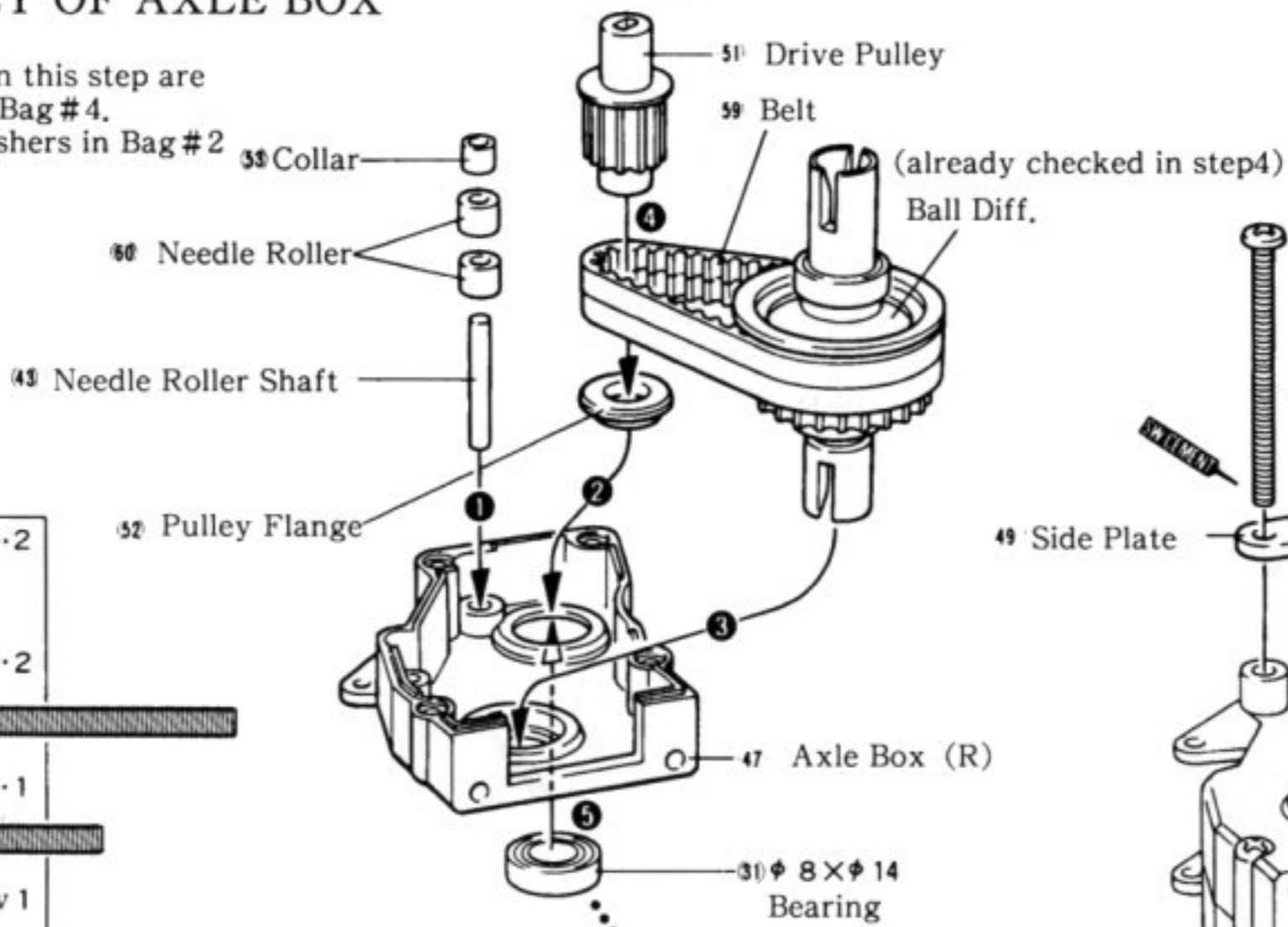
Use in Step 8.

6 ASSEMBLY OF AXLE BOX

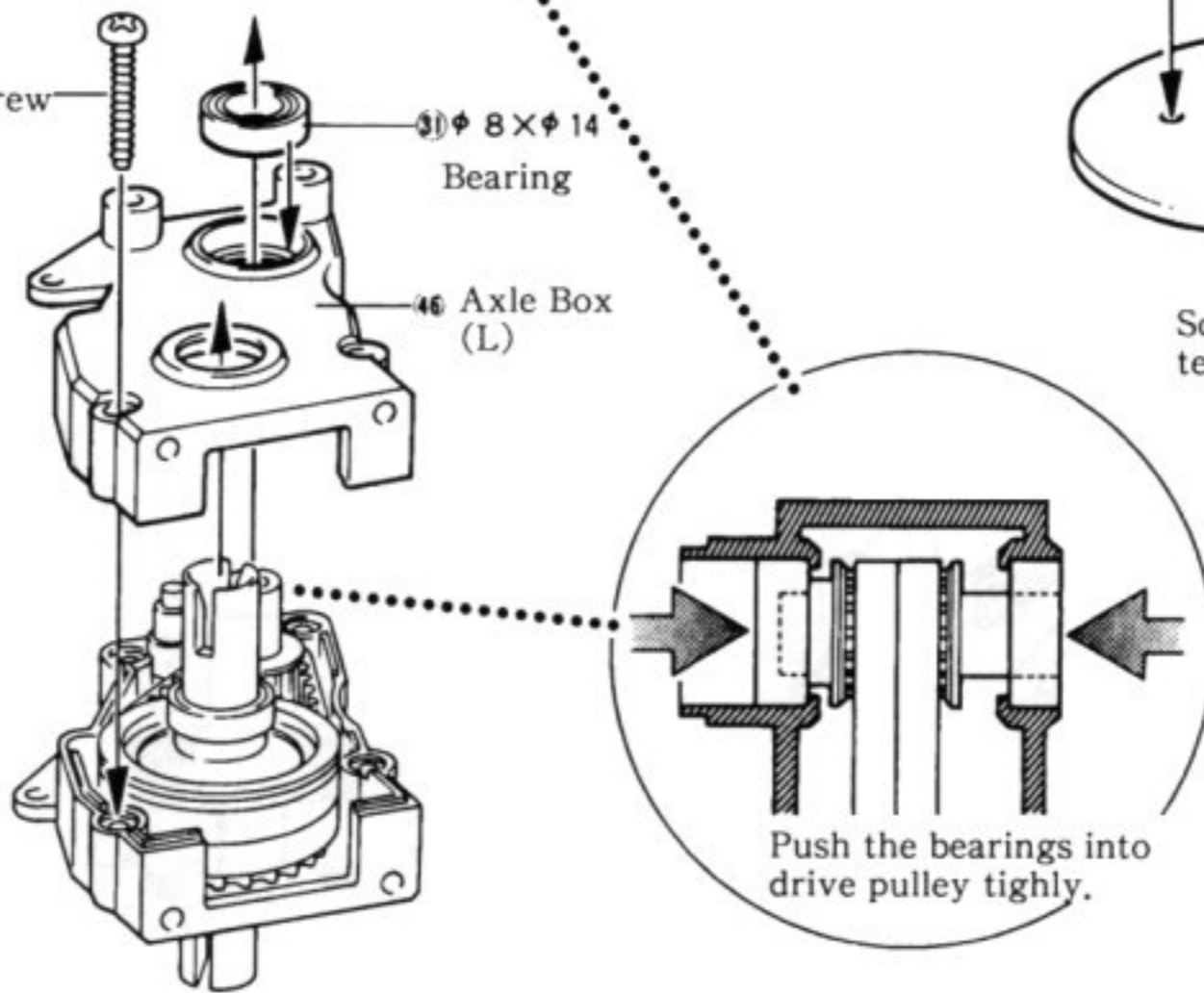
*Parts used in this step are included in Bag #4.
Screws, Washers in Bag #2

Stage 1

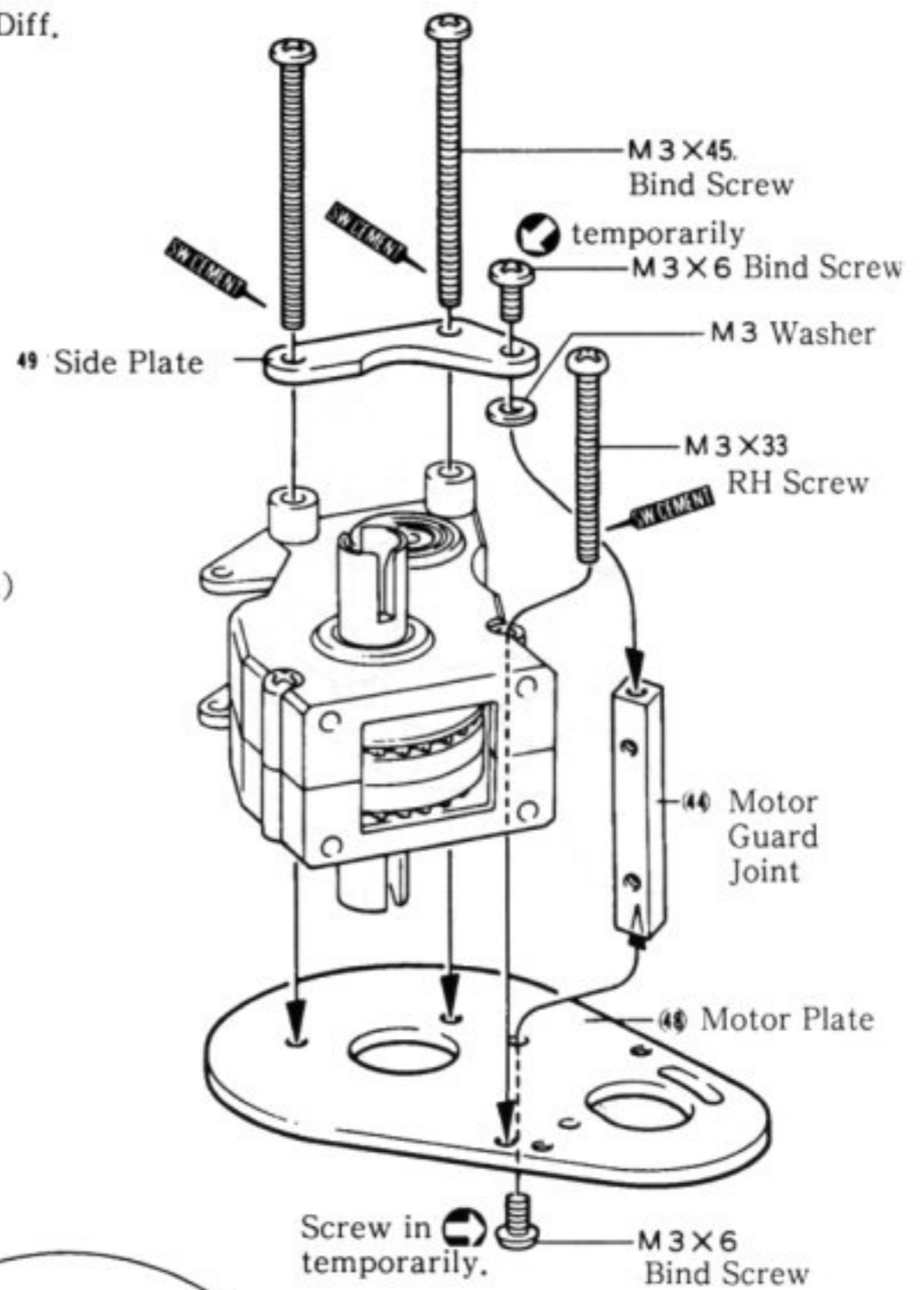
- M3 X 6 Bind Screw...2
- M3 X 45 Bind Screw...2
- M3 X 33 RH Screw...1
- M3 X 18 T P RH Screw 1
- M3 Washer1
- ⑤⑥ Needle Roller.....2
- ④③ Needle Roller Shaft
- ⑤③ Collar.....1



Stage 2



Stage 3



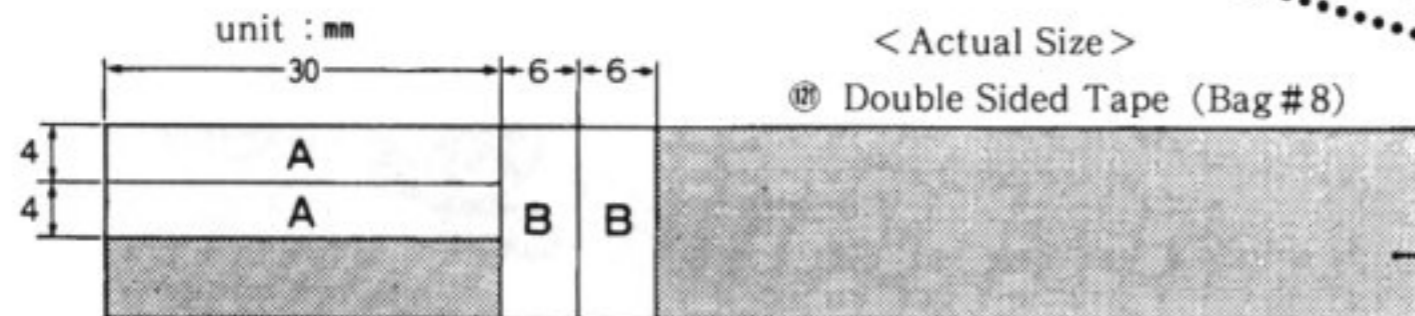
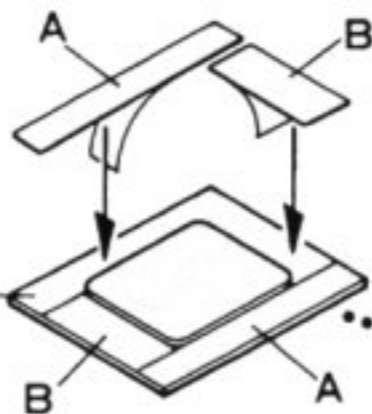
7 INSTALLATION OF AXLE BOX

Stage 1

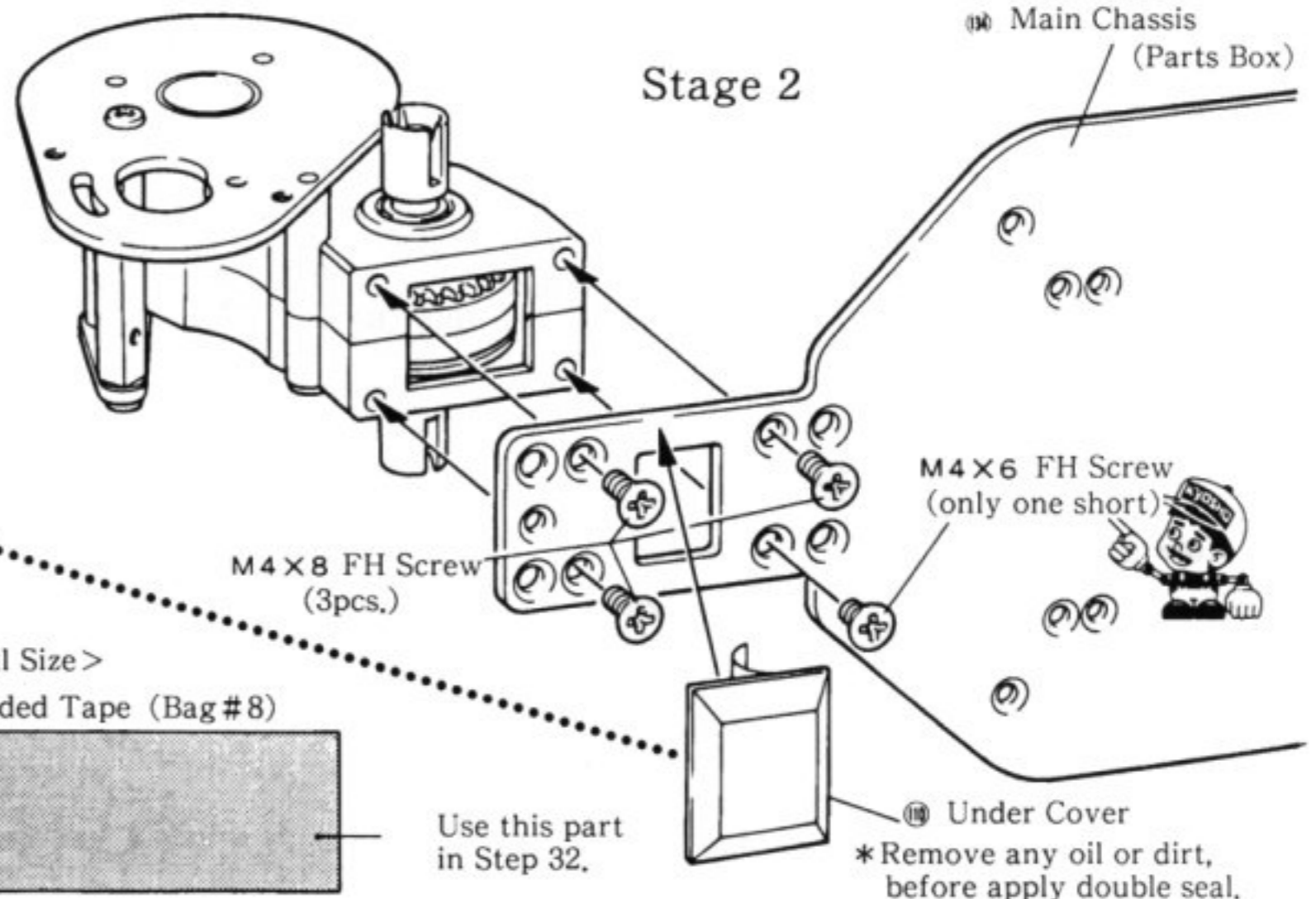
Cut double sided tapes as same as actual size.

- M4 X 8 FH Screw...3
- M4 X 6 FH Screw...1

⑩ Under Cover (Bag #6)



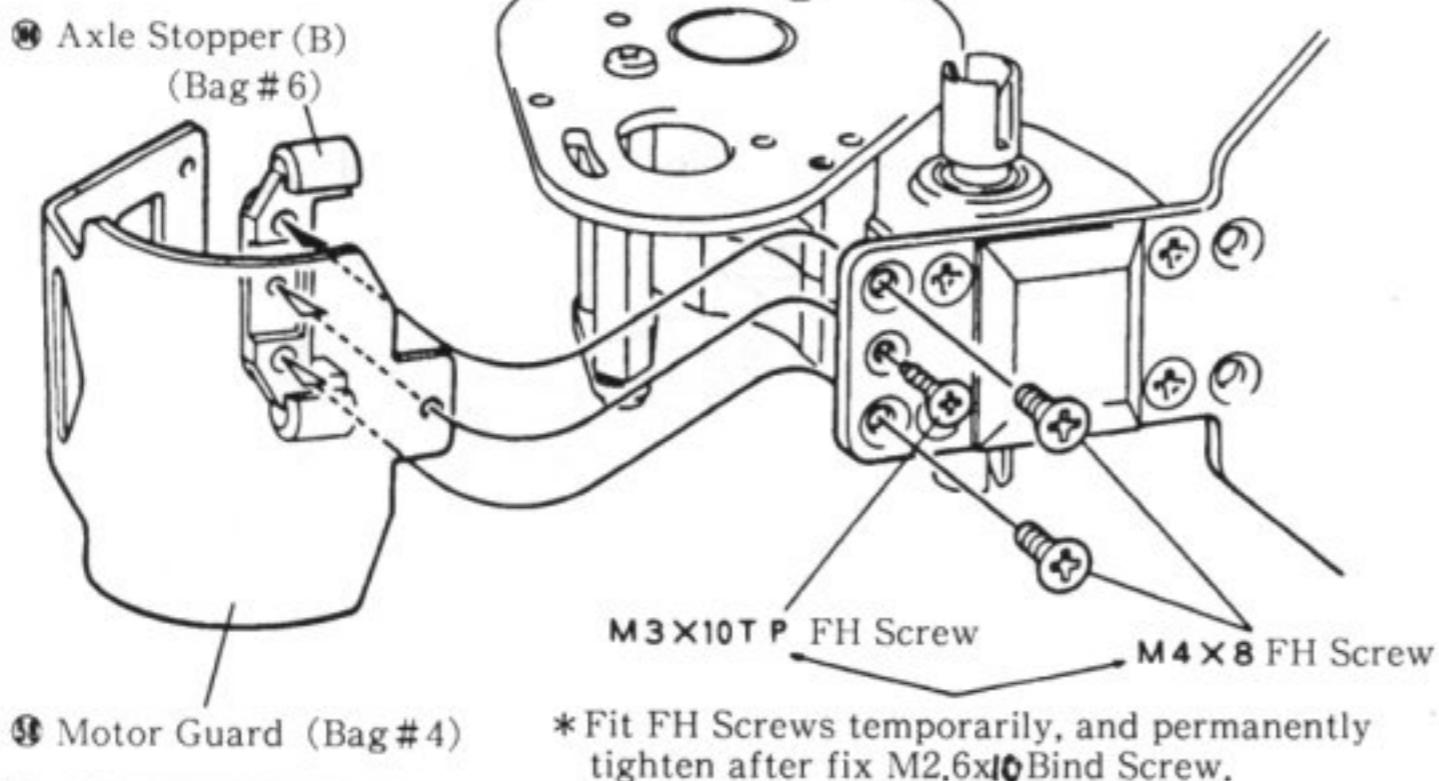
Stage 2



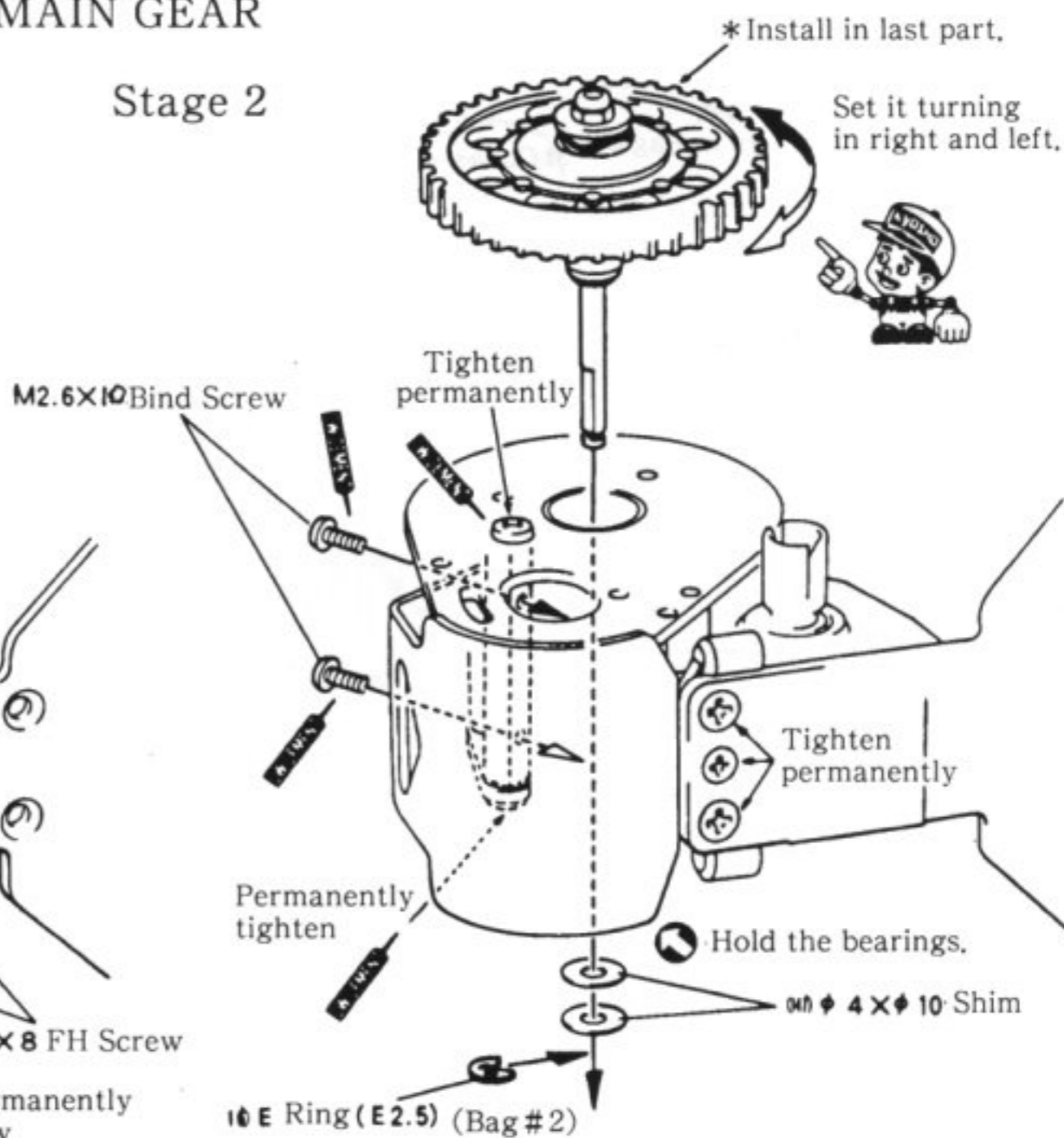
8 INSTALLATION OF MOTOR GUARD & MAIN GEAR

- M2.6X10 Bind Screw.....2
- M4X8 FH Screw.....2
- M3X10T P FH Screw.....1
- 4X10 Shim.....2
- E Ring(E2.5).....1

Stage 1



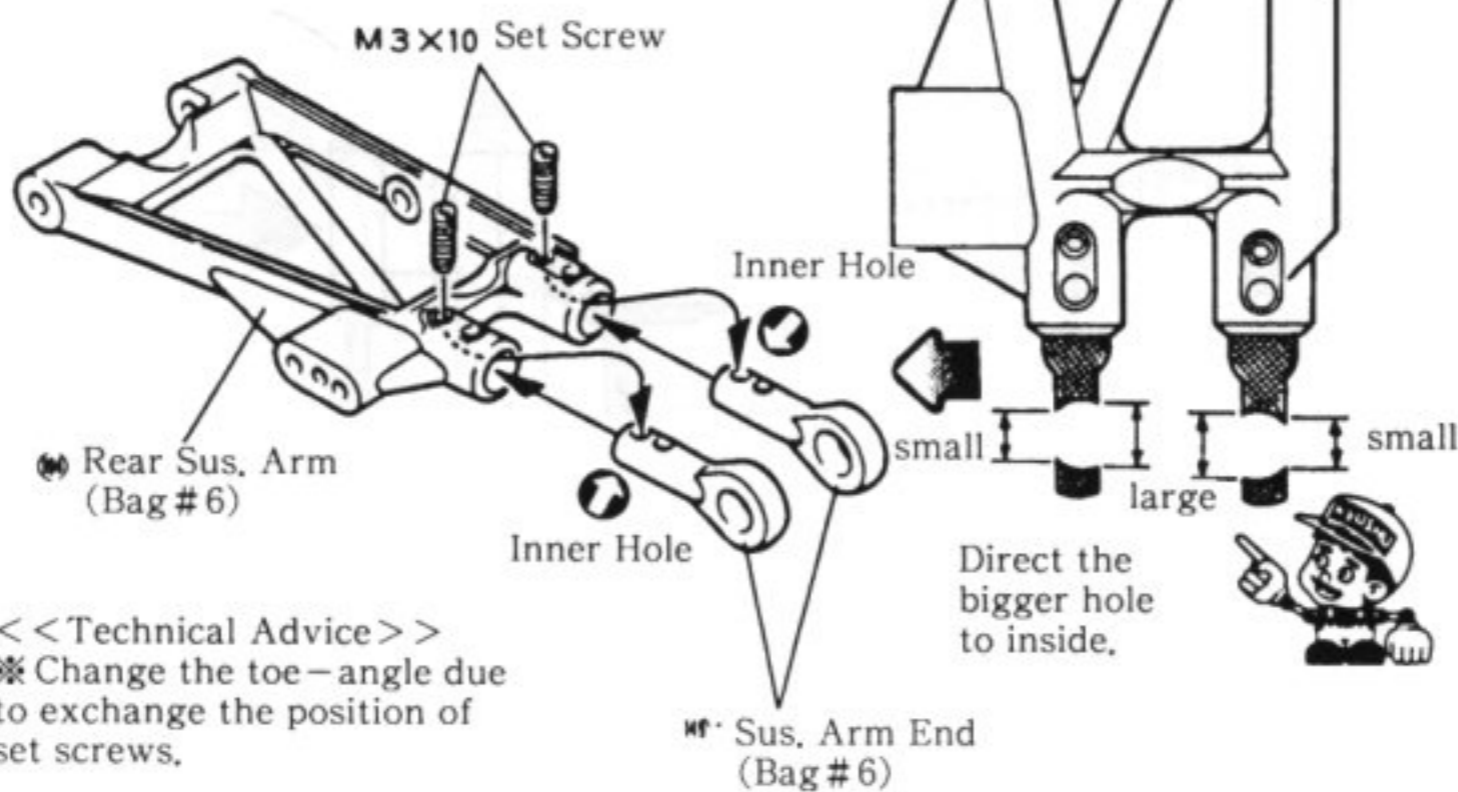
Stage 2



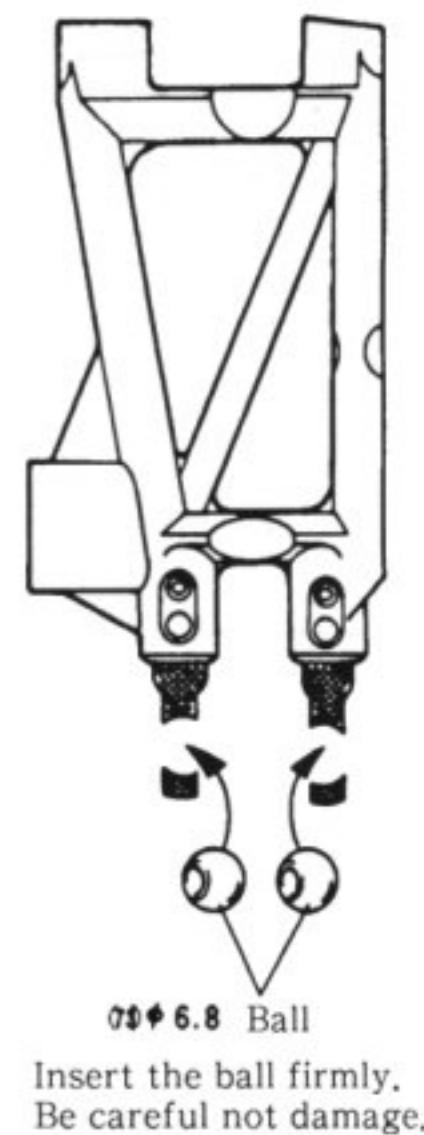
9 ASSEMBLY OF REAR SUS. ARM

- M3X10-Set Screw.....4
- 5X8.5 Shim.....2
- 5X10 Bearing ..4
- M4 Nylon Nut with Flange.....2
- 6.8 Ball.....4

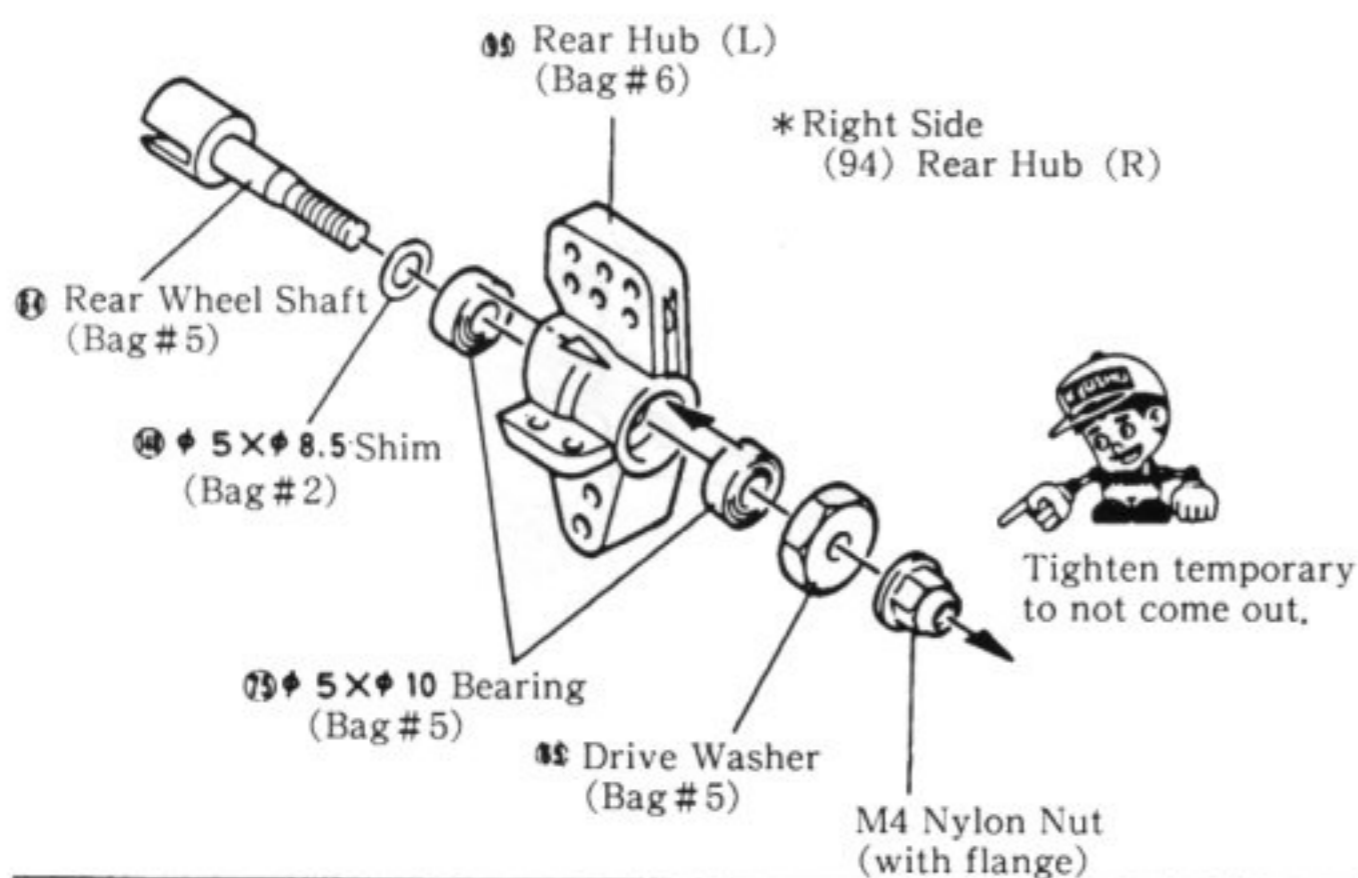
Stage 1



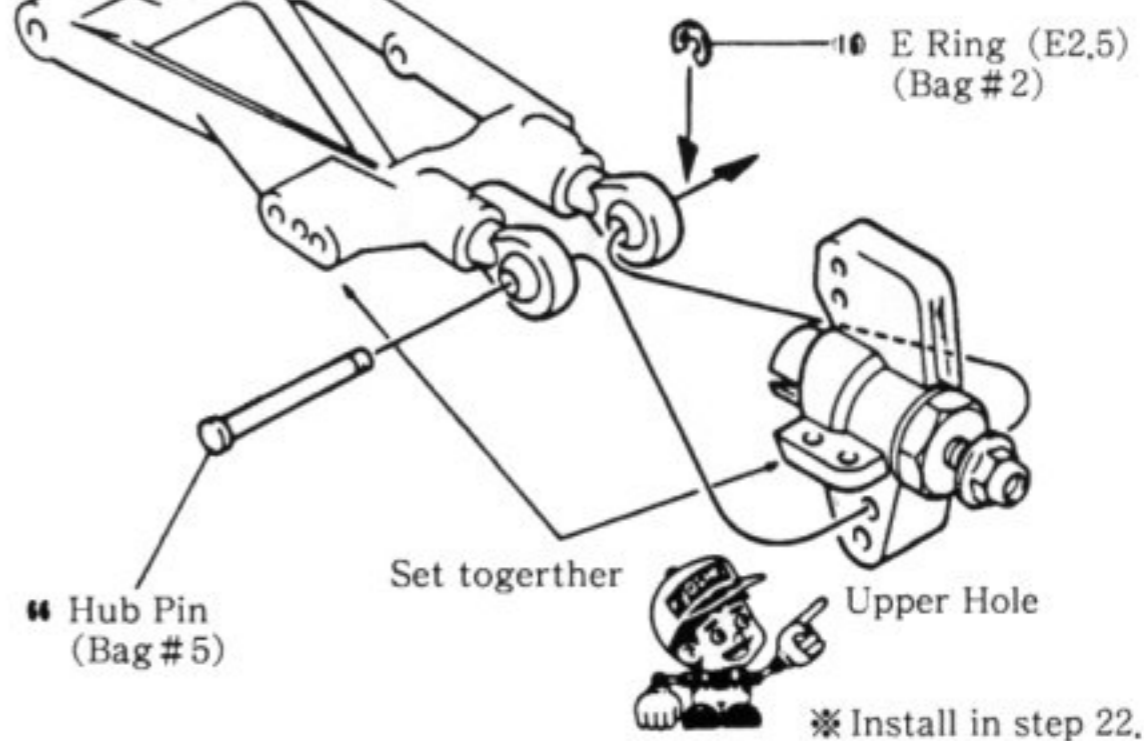
Stage 2



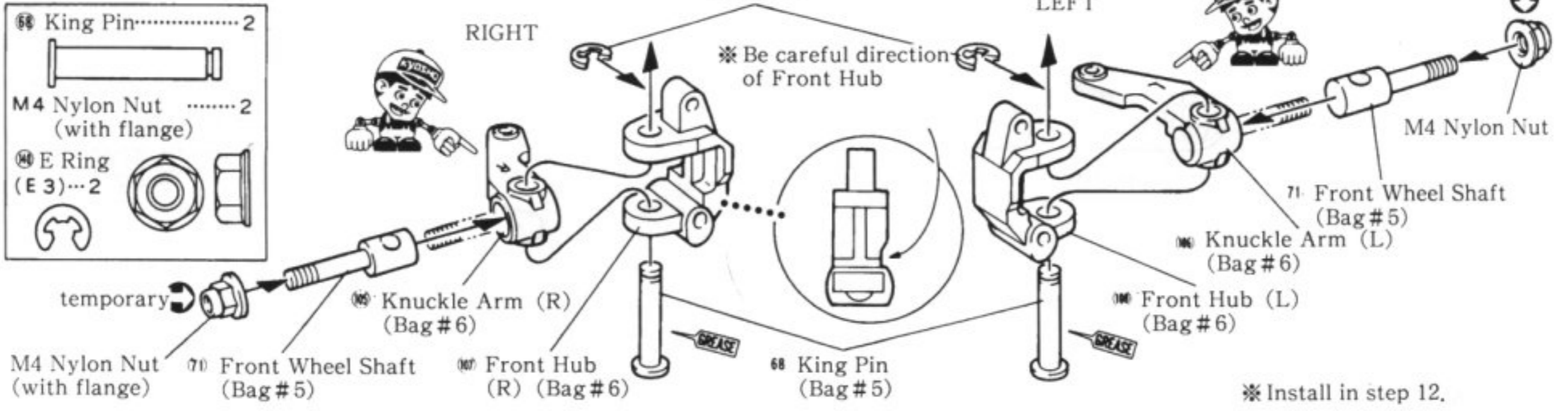
Stage 3



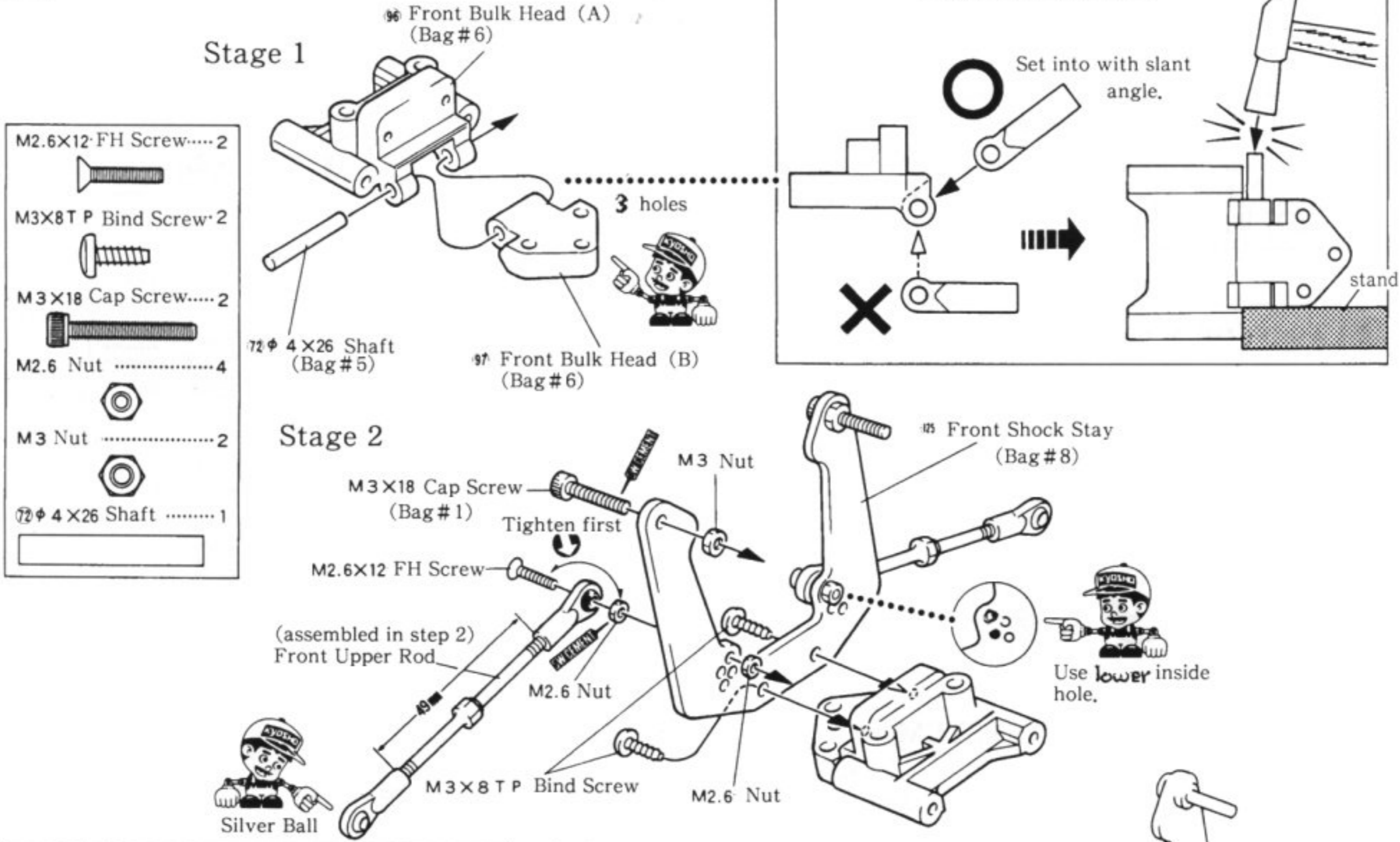
Stage 4



10 ASSEMBLY OF FRONT HUB

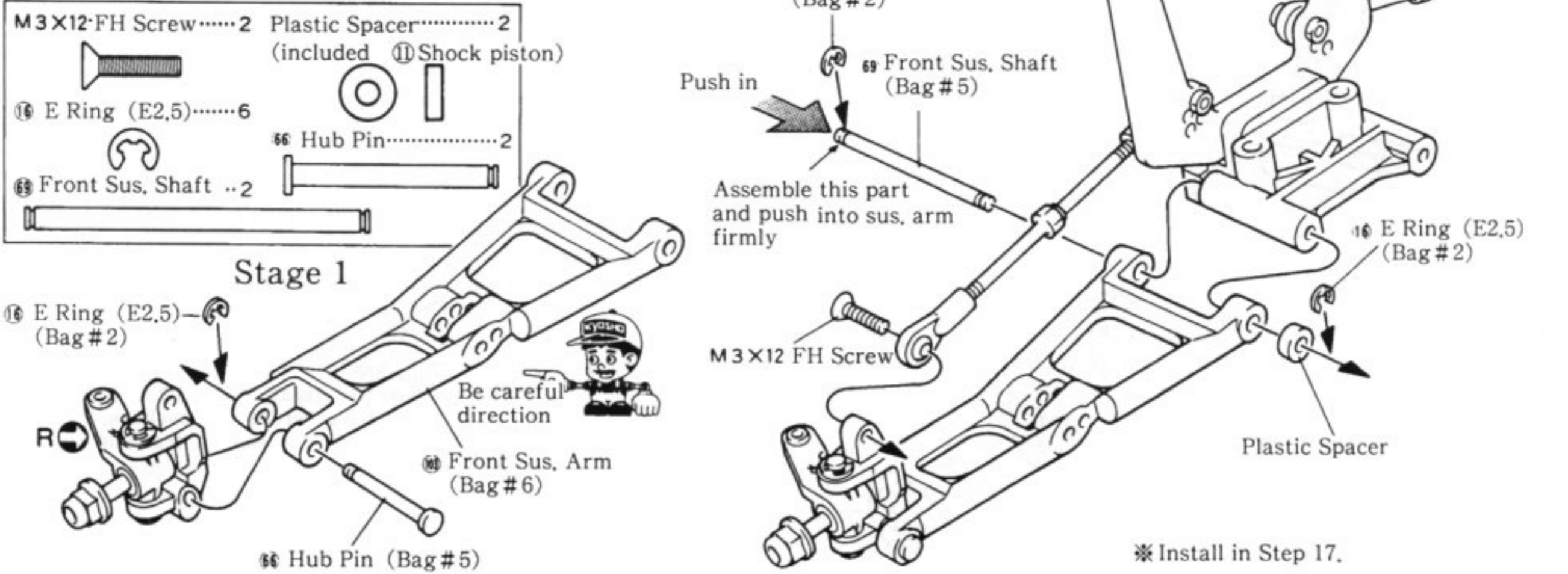


11 ASSEMBLY OF FRONT BULK HEAD



12 INSTALLATION OF FRONT UPPER ROD AND SUS. ARM

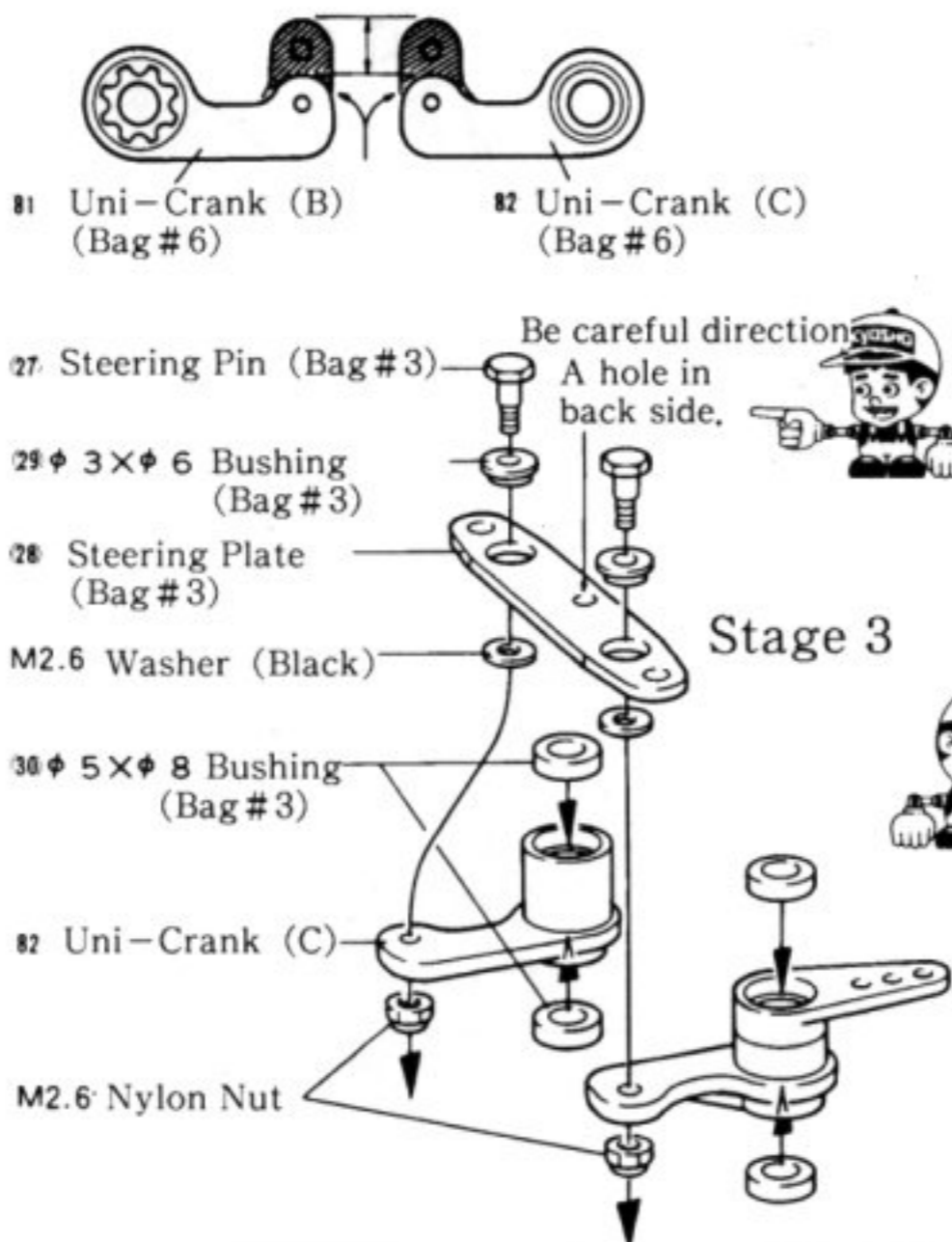
This is for right side and assemble left side as same.



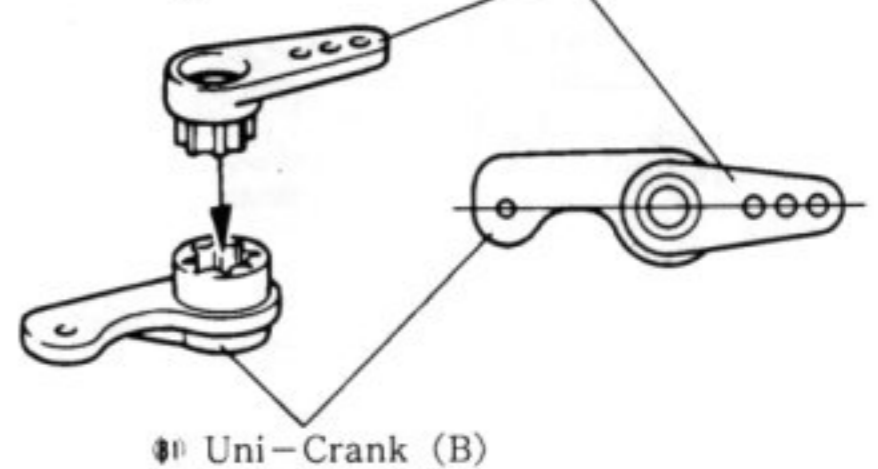
13 ASSEMBLY OF UNI-CRANK

Stage 1 Cut 7mm from shaded area.

- M3 X15 FH Screw..... 2
- M3 Nut 2
- M2.6 Washer (Black) 2
- Steering Pin 2
- 3x6 Bushing ... 2
- 5x8 Bushing... 4
- M2.6 Nylon Nut 2

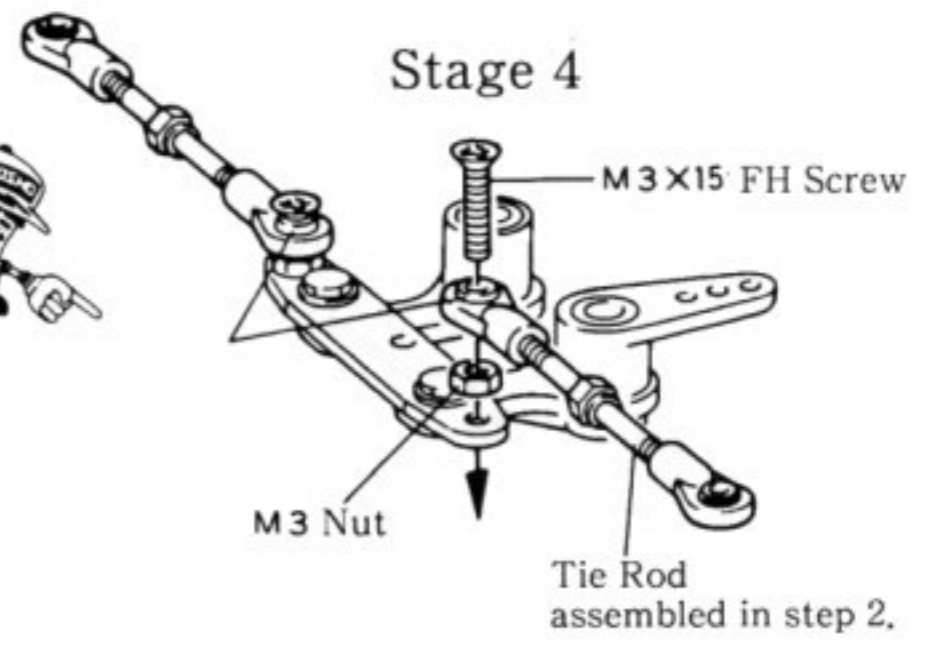


Stage 2 Uni-Crank (A) (Bag #6)



Stage 3

Stage 4



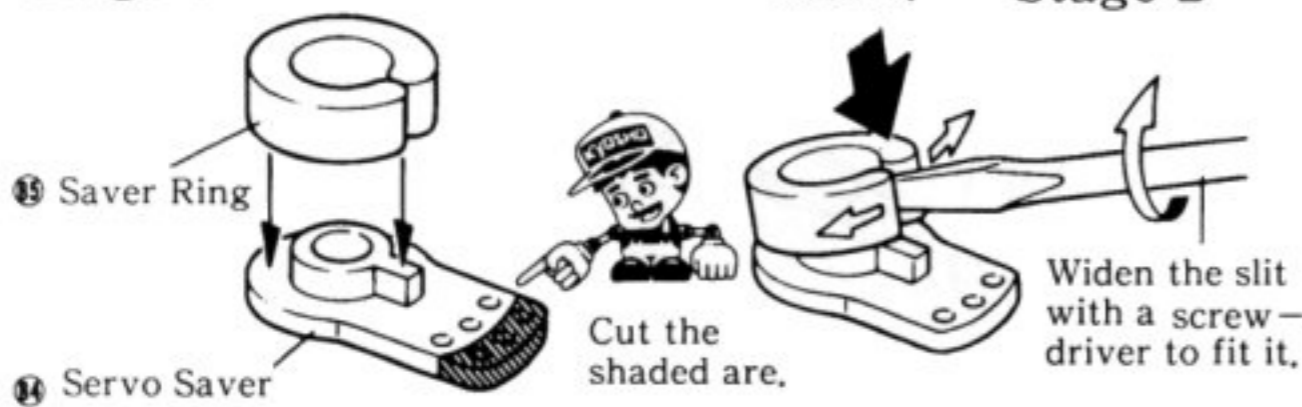
* Use in Step 17.

14 ASSEMBLY OF SERVO SAVER

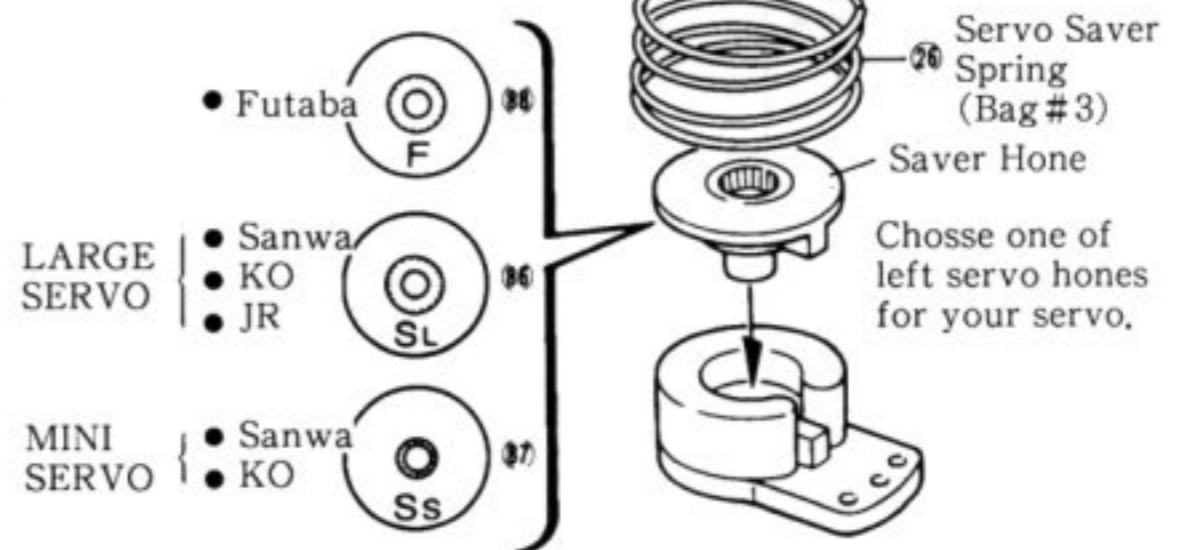
These plastic parts are in Bag #6.

Stage 1

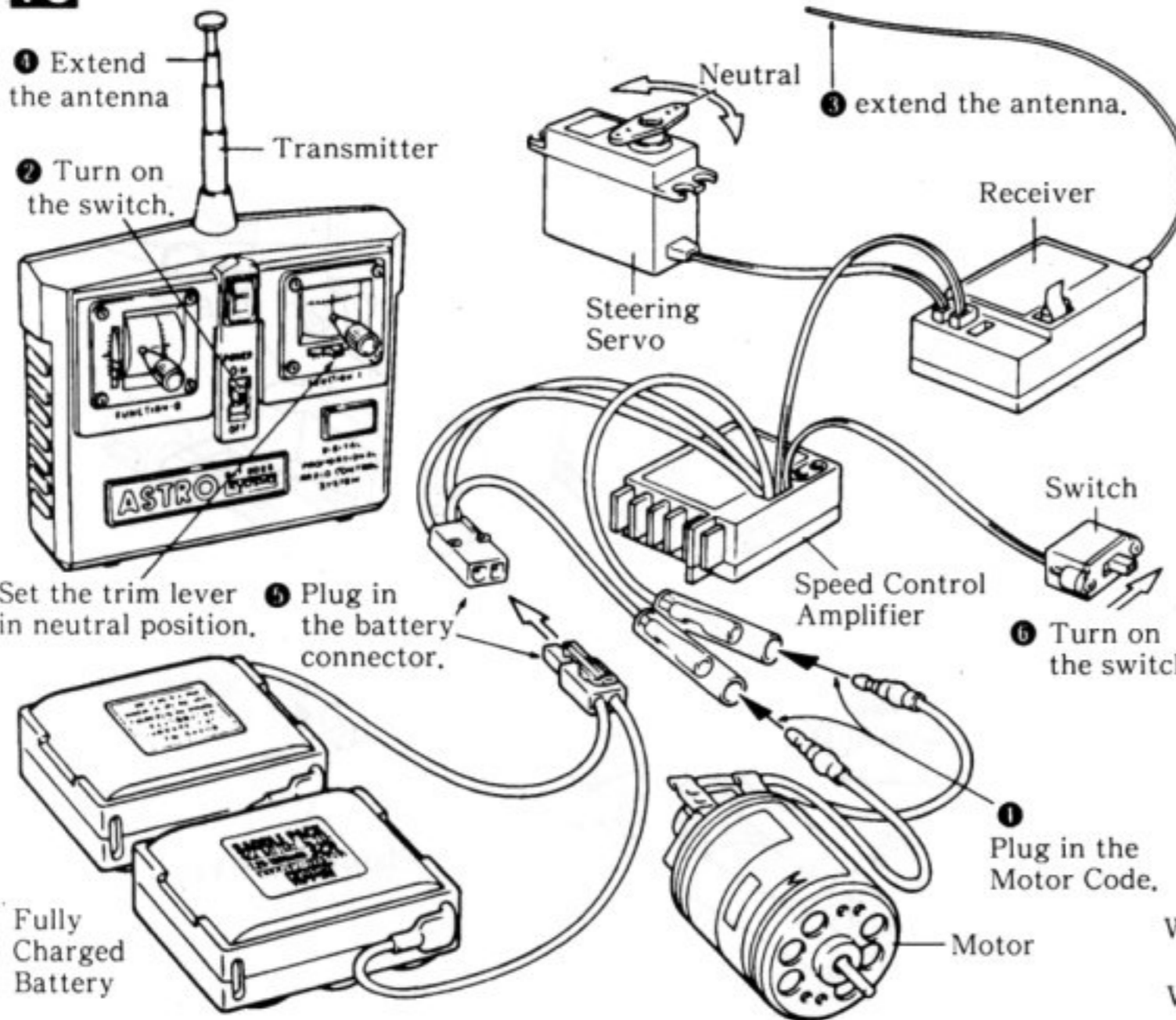
Stage 2



Stage 3



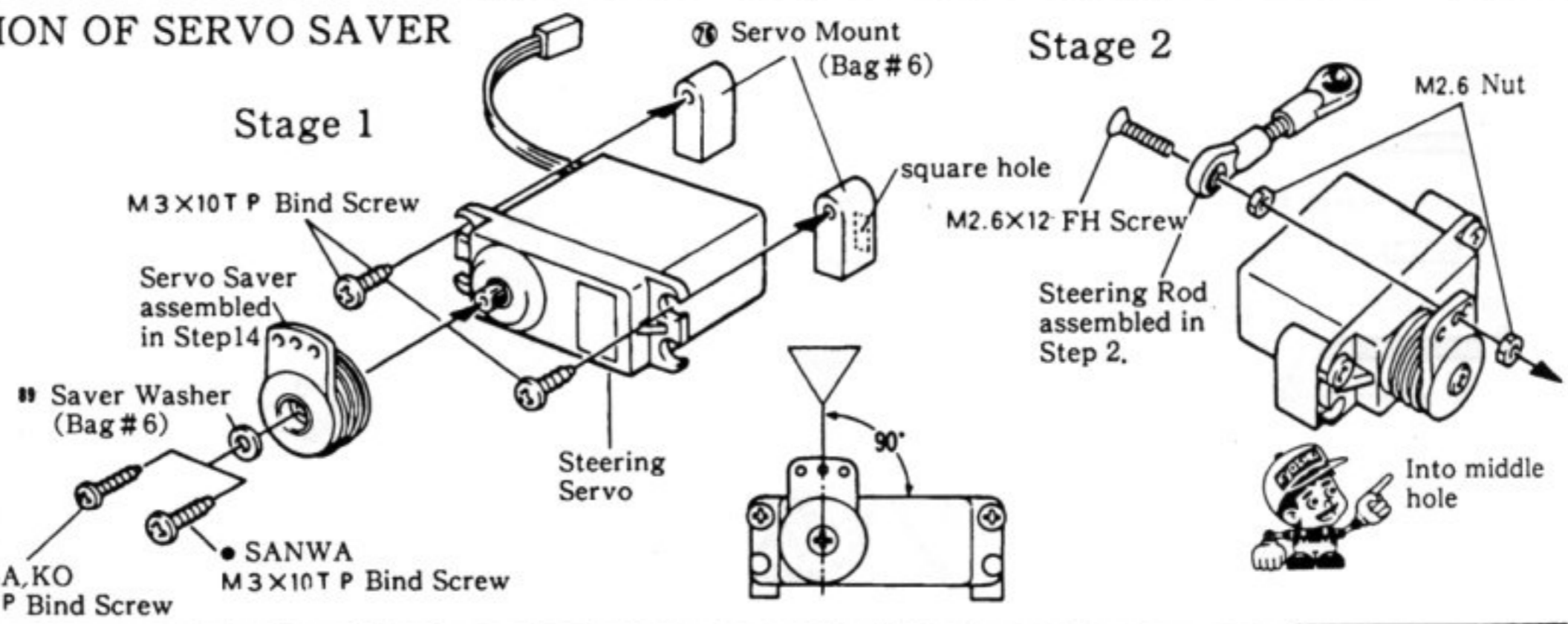
15 CHECK THE RADIO SYSTEM



- * Operate the radio control units in order of the numerical figures.
 - A two channel radio is composed of things like a battery, transmitter, receiver and servos.
 - * Transmitter ... It is in effect a control box. Signal waves are transmitted through an antenna according to the stick movements
 - * Receiver ... Receives the signals from the transmitter and send them to the servos.
 - * Servo ... They really 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 Horns ... They are intermediate devices on the servos to activate the controls. There 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.

16 INSTALLATION OF SERVO SAVER

- M2.6X12 FH Screw.....1
- M2.6 Nut2
- M2.6X12TP Bind Screw 1
- M3X10T P Bind Screw 2 (for Sanwa servo...3)
- FUTABA, KO M2.6X12T P Bind Screw

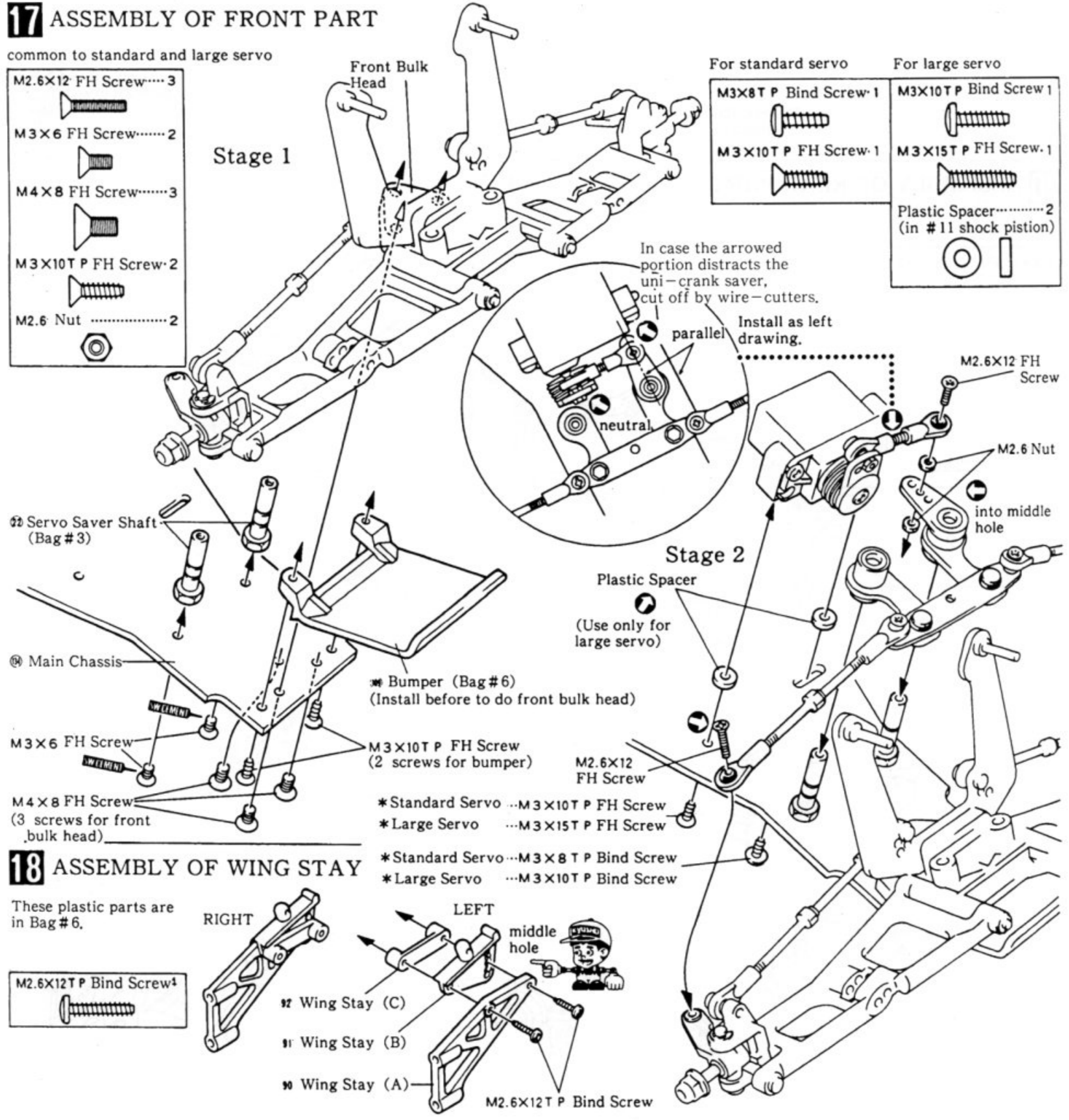


17 ASSEMBLY OF FRONT PART

common to standard and large servo

- M2.6X12 FH Screw.....3
- M3X6 FH Screw.....2
- M4X8 FH Screw.....3
- M3X10T P FH Screw.....2
- M2.6 Nut2

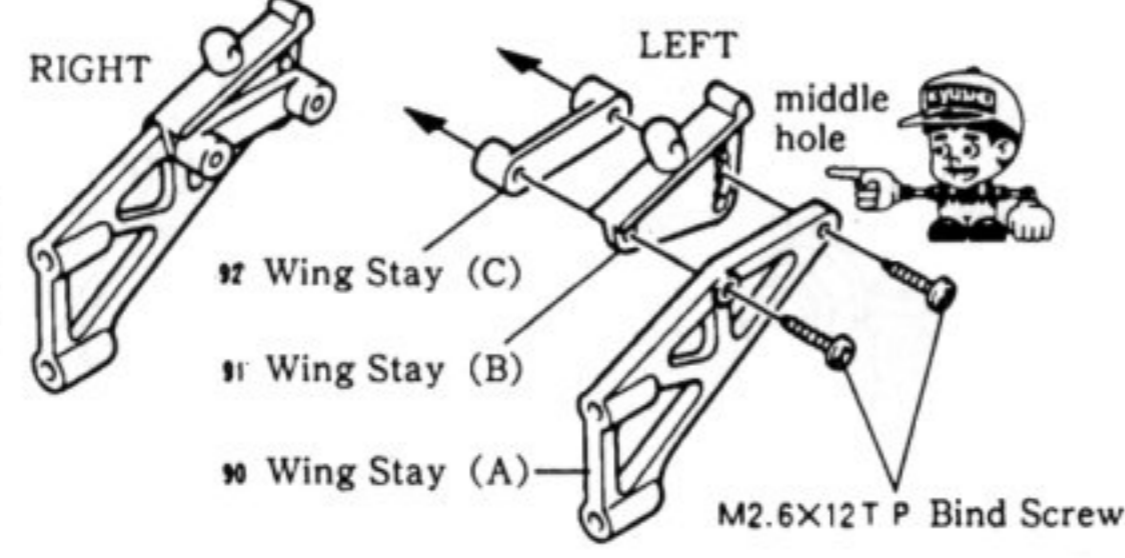
- | For standard servo | For large servo |
|----------------------|--|
| M3X8T P Bind Screw 1 | M3X10T P Bind Screw 1 |
| M3X10T P FH Screw 1 | M3X15T P FH Screw 1 |
| | Plastic Spacer.....2 (in #11 shock piston) |



18 ASSEMBLY OF WING STAY

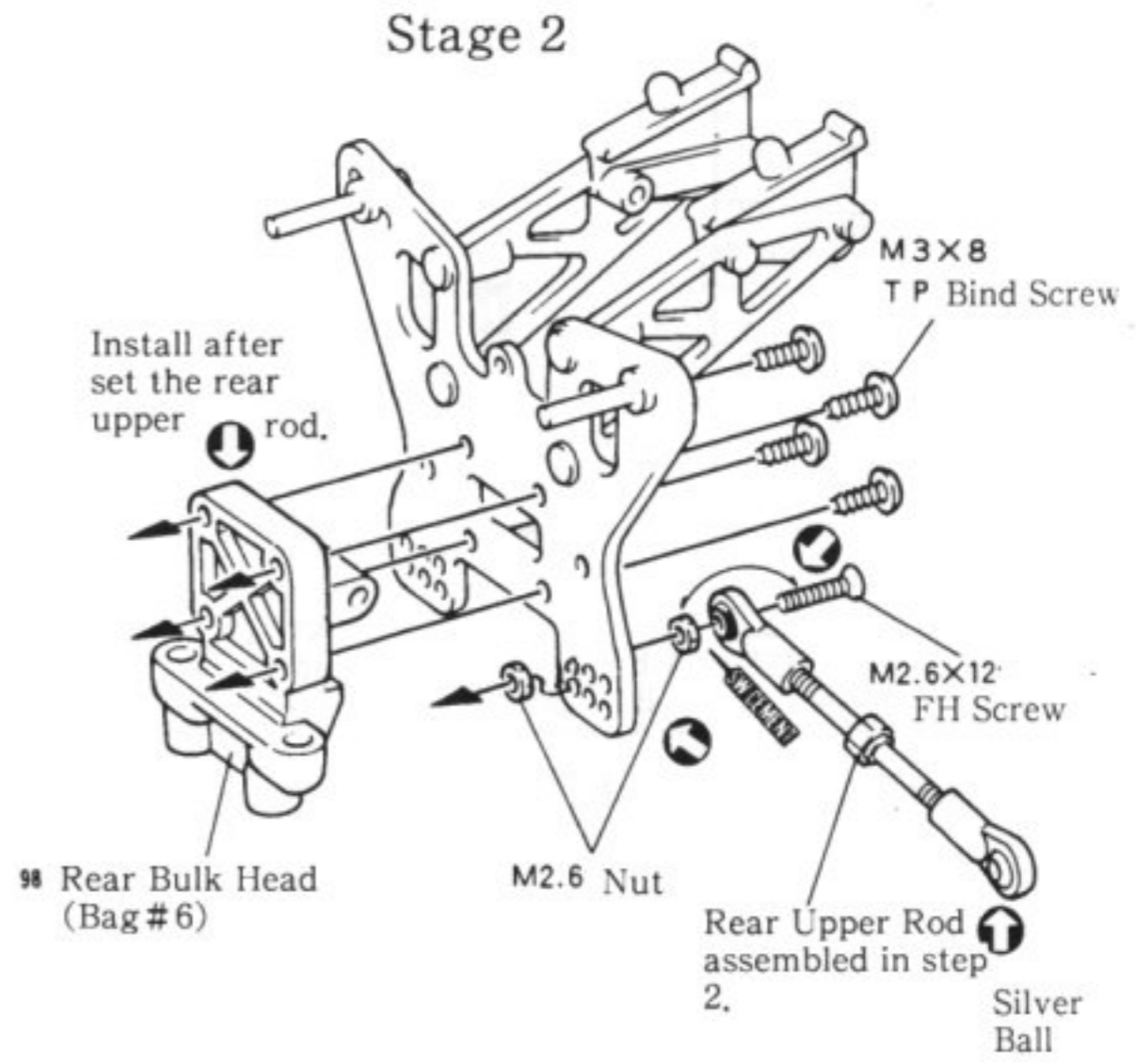
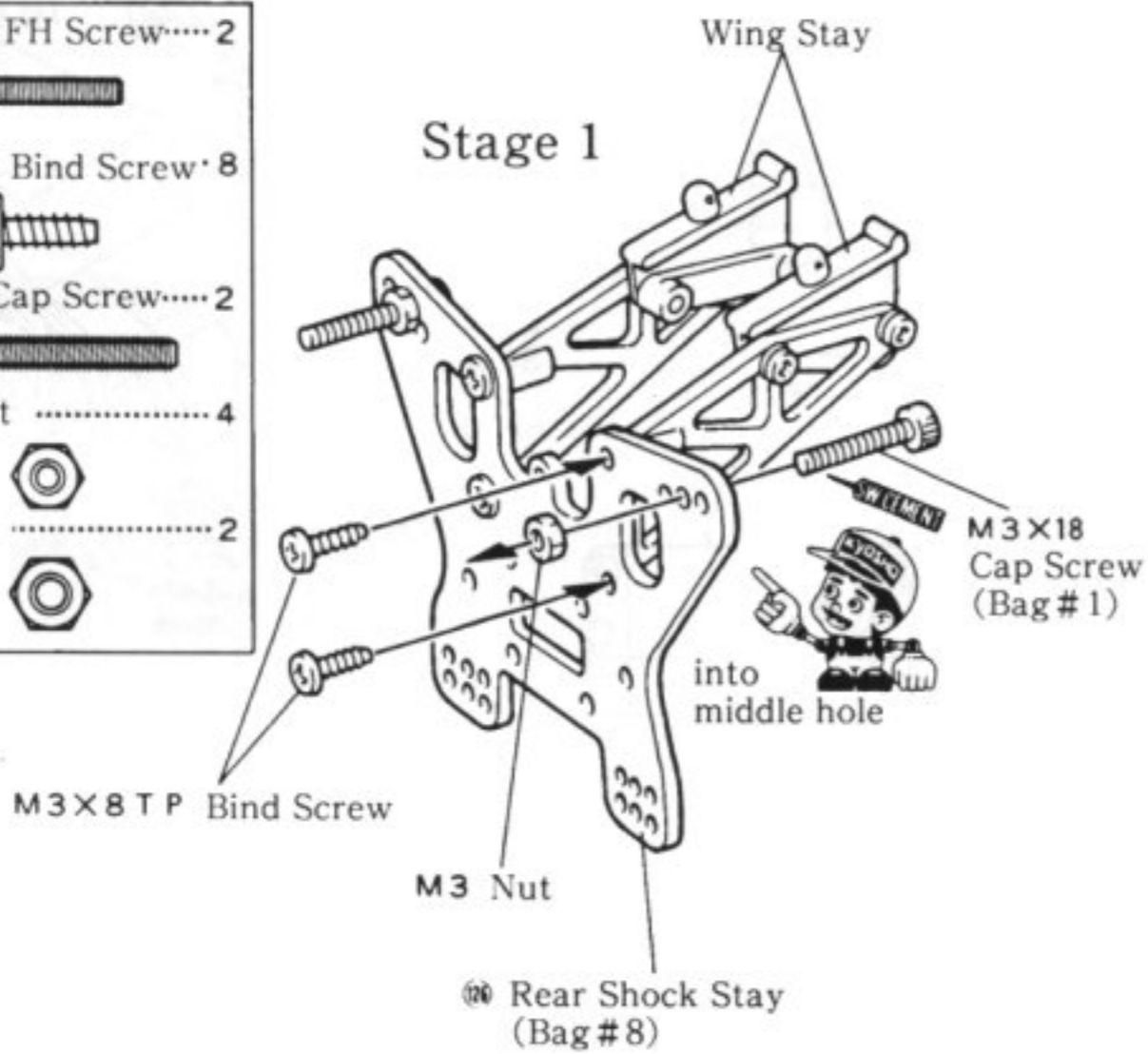
These plastic parts are in Bag #6.

- M2.6X12T P Bind Screw 4



19 INSTALLATION OF REAR SHOCK STAY

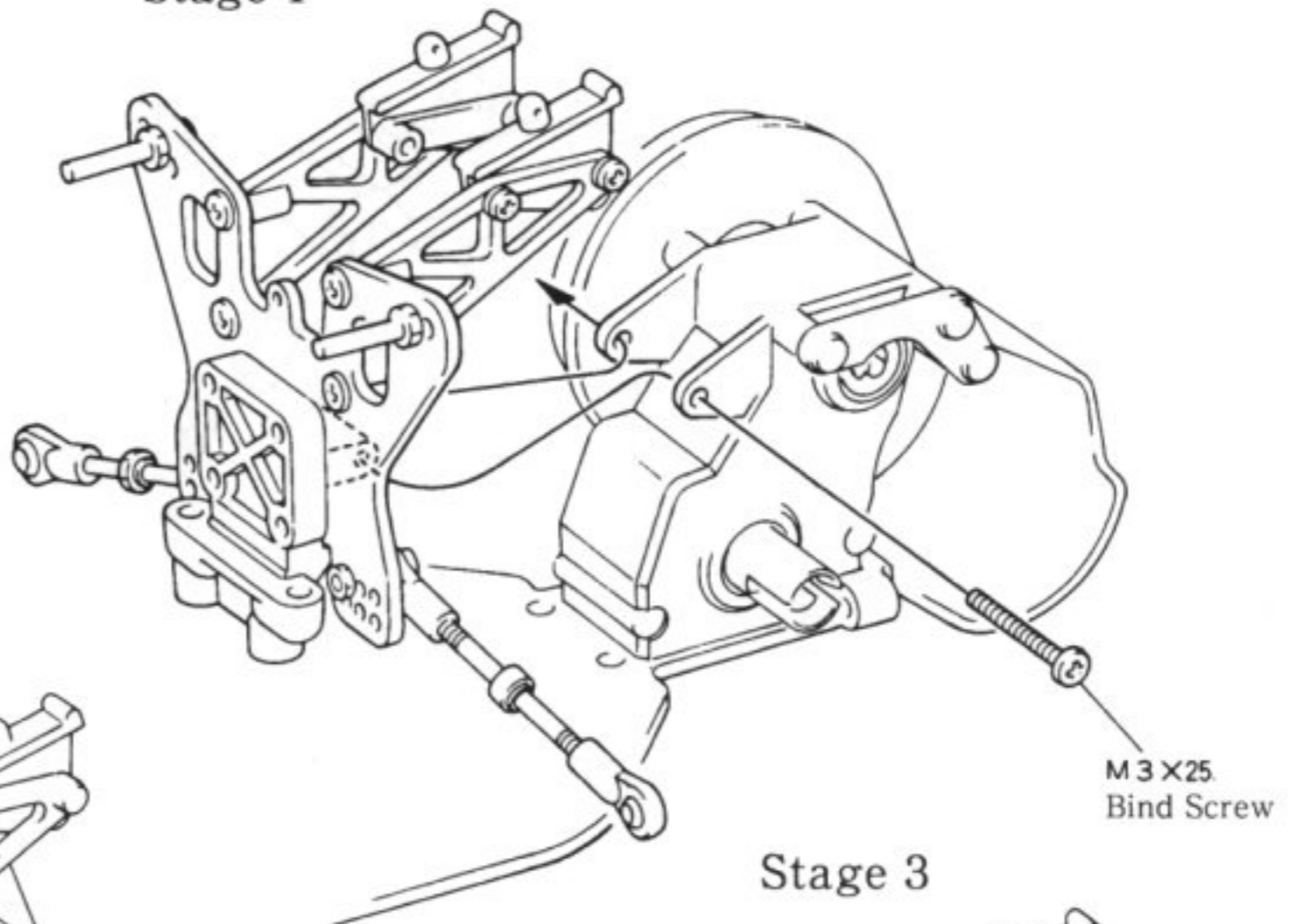
- M2.6X12' FH Screw..... 2
- M3X8 T P Bind Screw..... 8
- M3 X18 Cap Screw..... 2
- M2.6 Nut 4
- M3 Nut 2



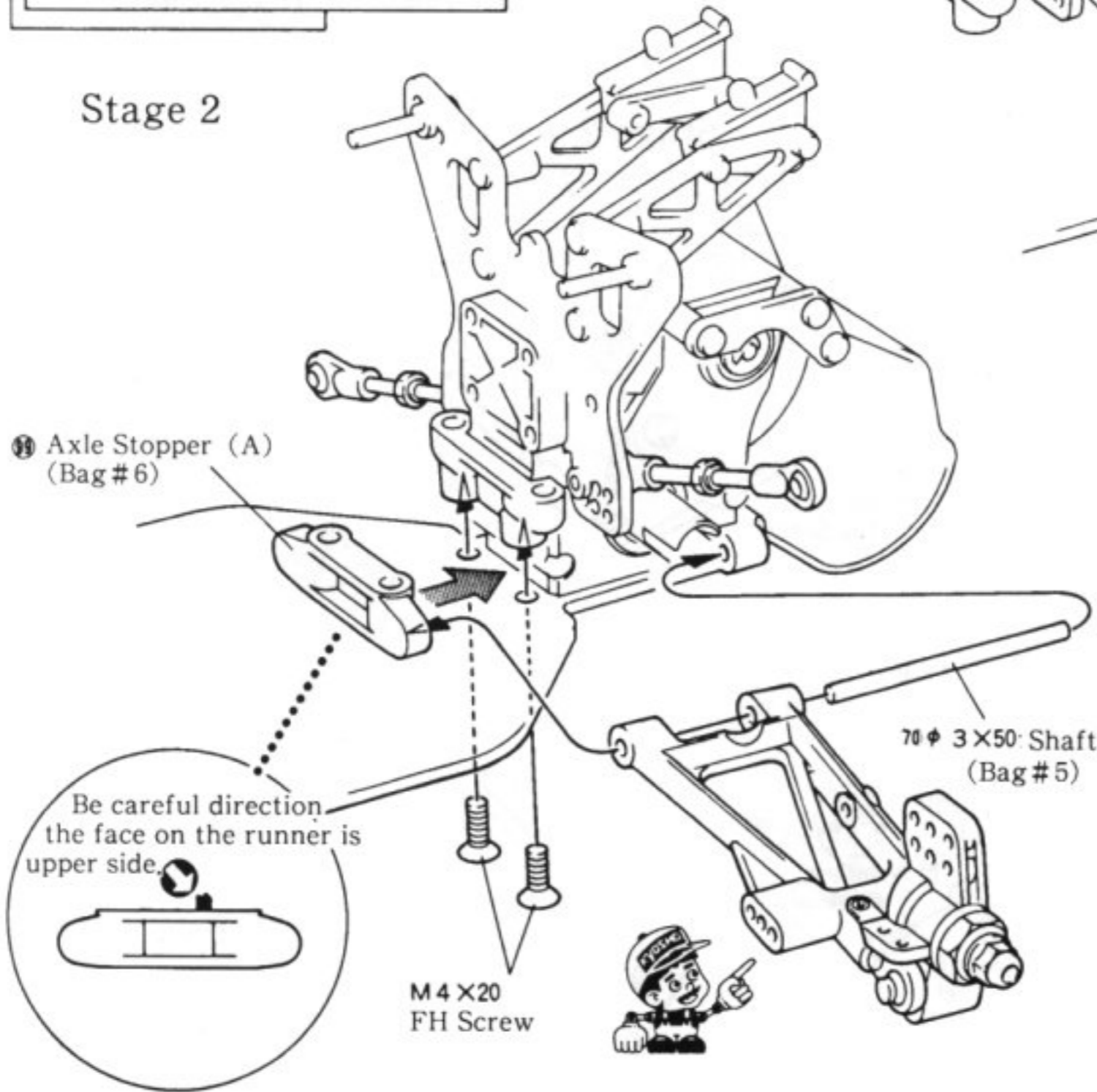
20 ASSEMBLY OF REAR PART

- M3 X12 FH Screw..... 2
- M3 X25 Bind Screw..... 1
- M4 X20 FH Screw..... 2
- 70 φ 3 X50 Shaft 2

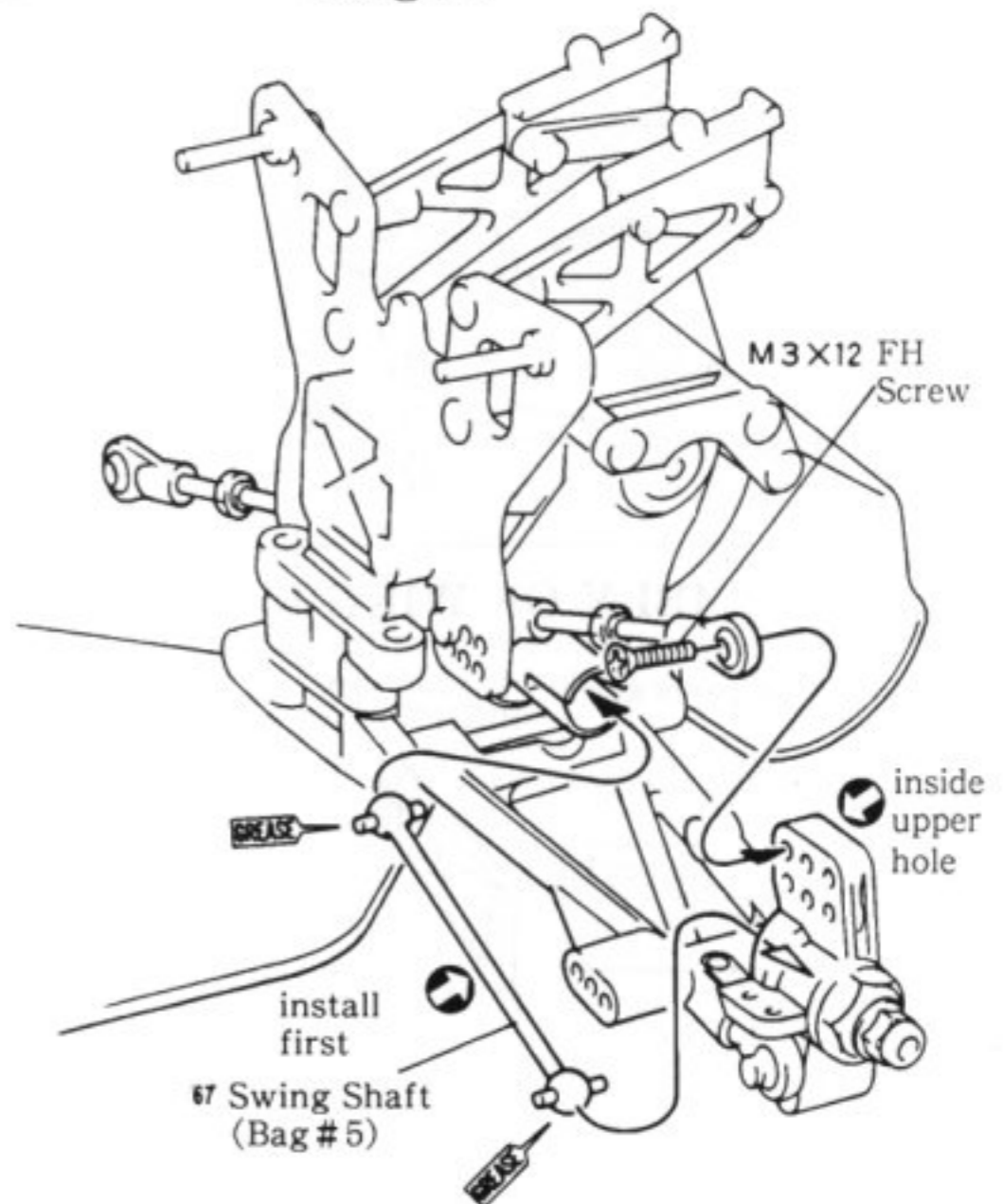
Stage 1



Stage 2



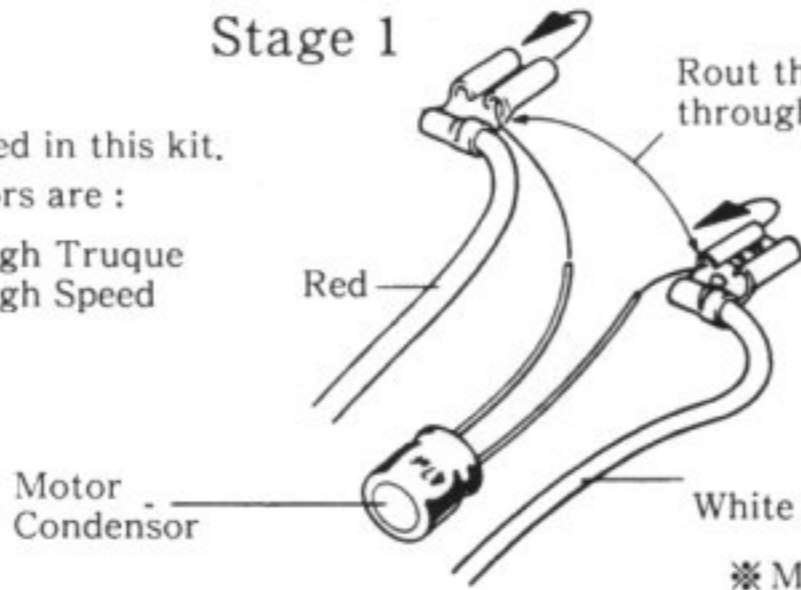
Stage 3



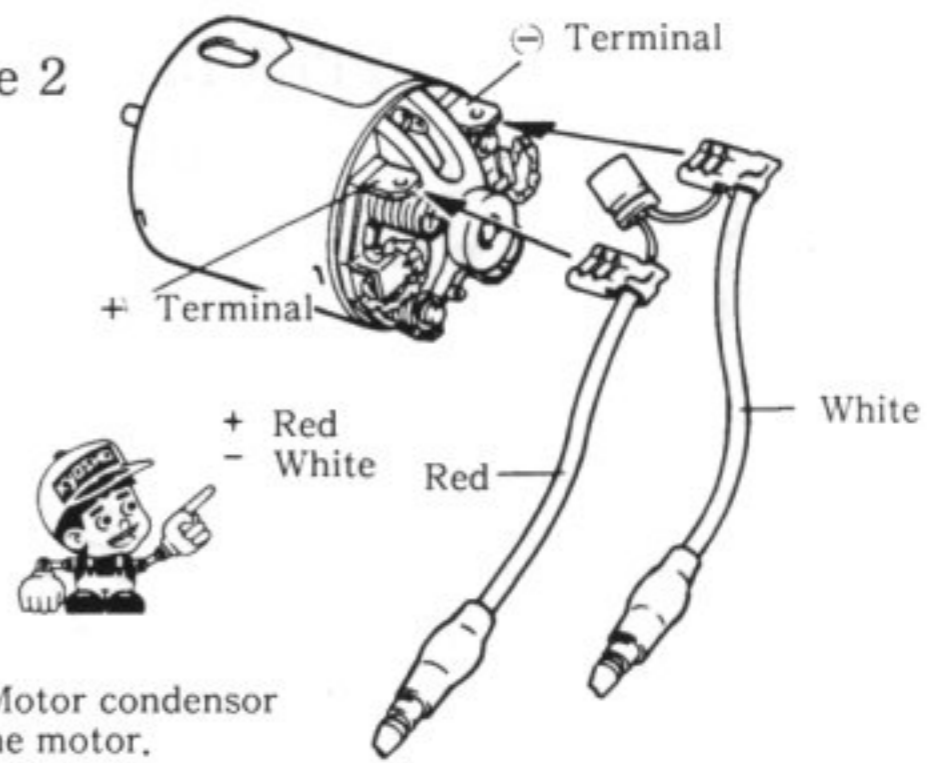
21 INSTALLATION OF MOTOR CODE

* Motor is not included in this kit.
Recommended motors are :

- ★ Le Mans Pro High Truque
- ★ Le Mans Pro High Speed

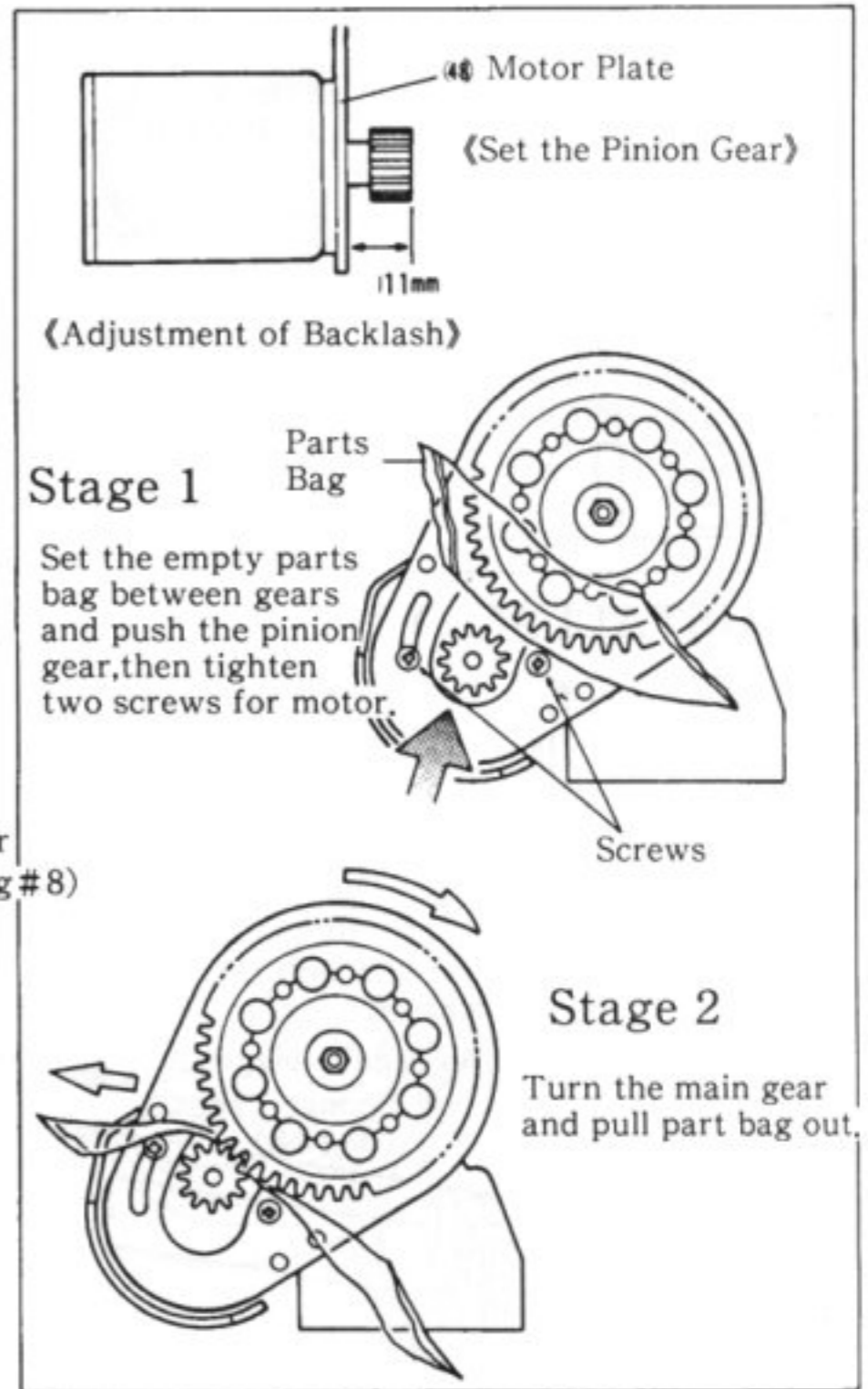
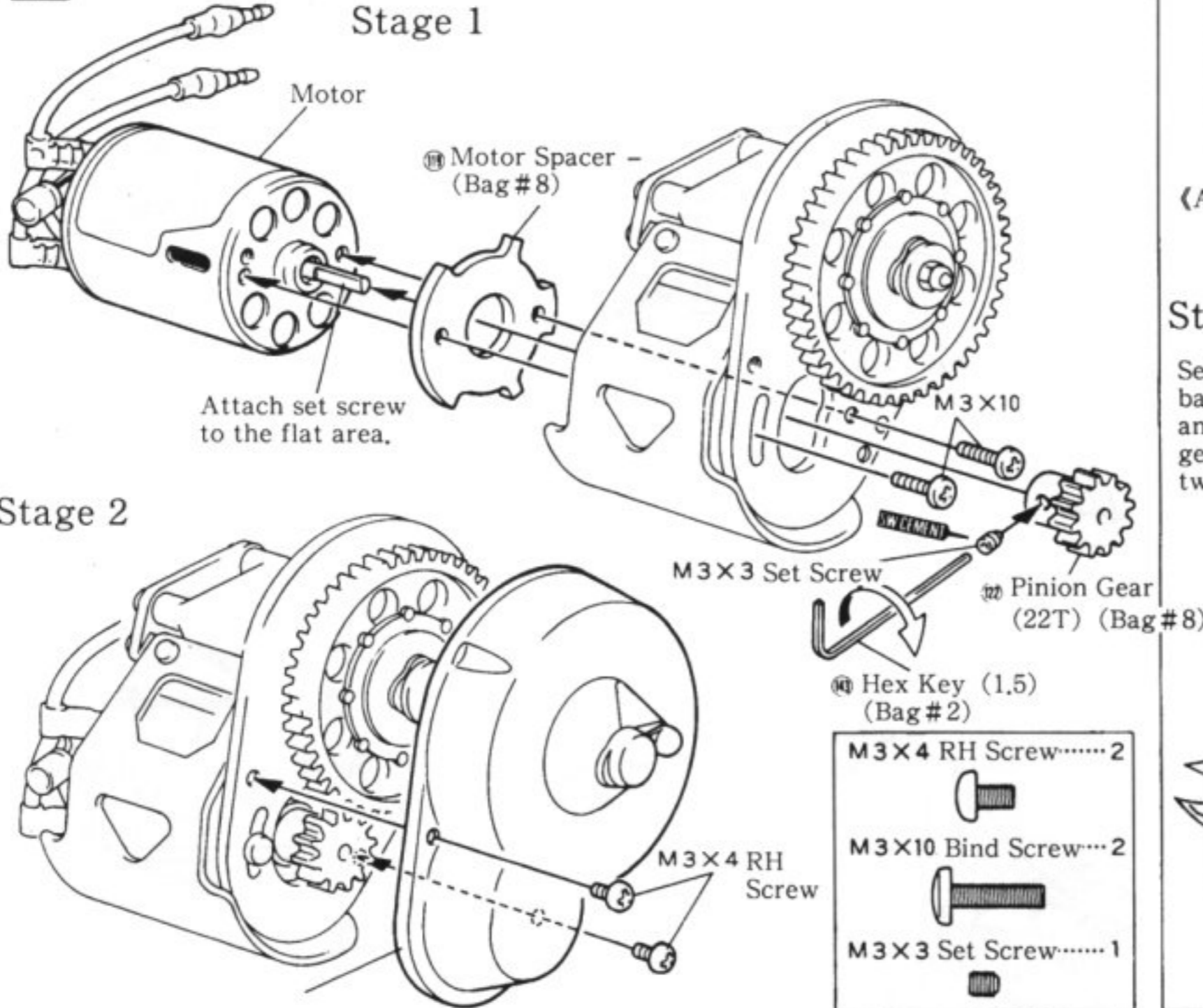


Stage 2

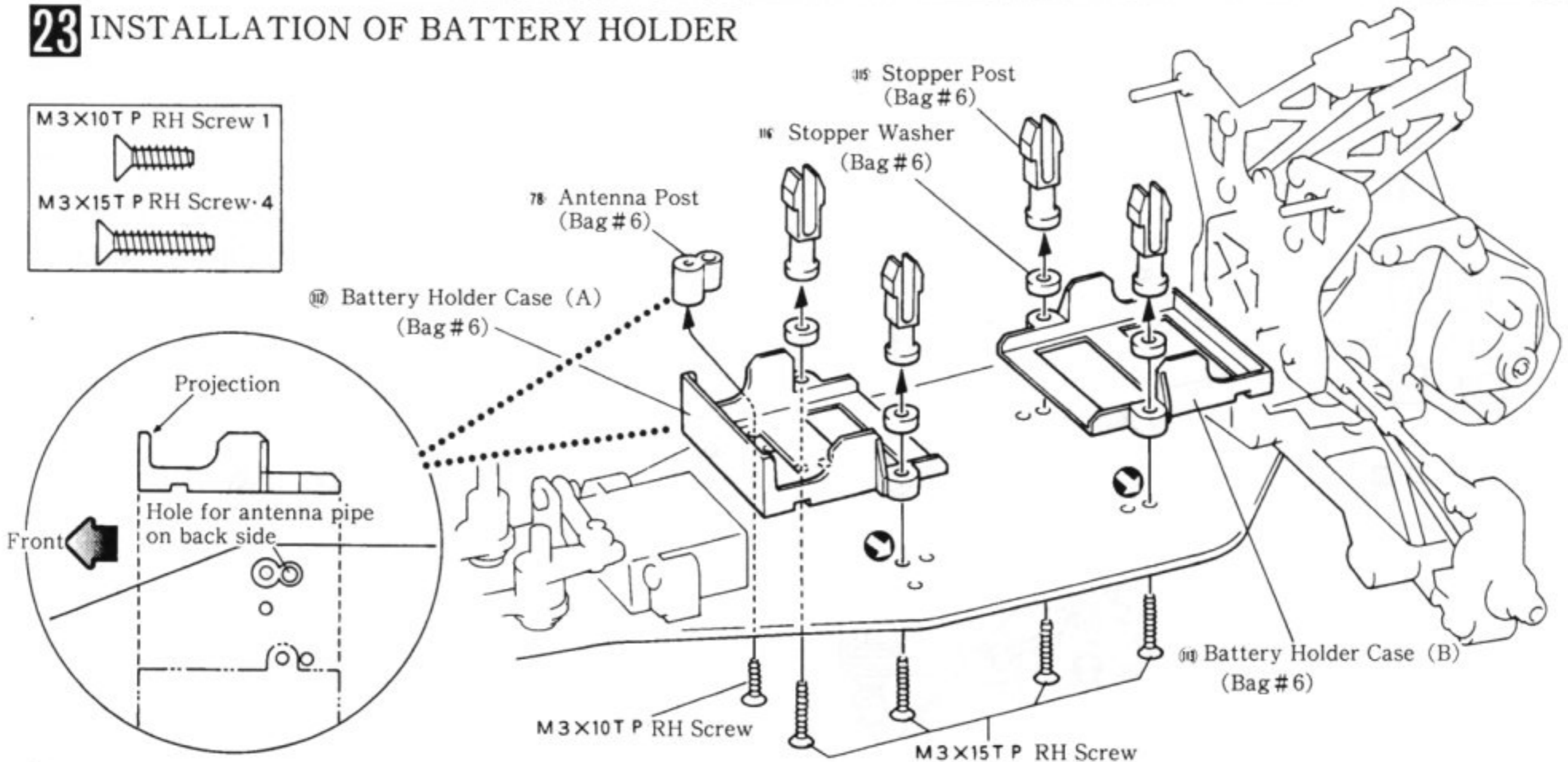
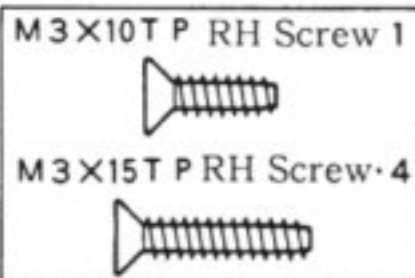


22 INSTALLATION OF MOTOR & GEAR COVER

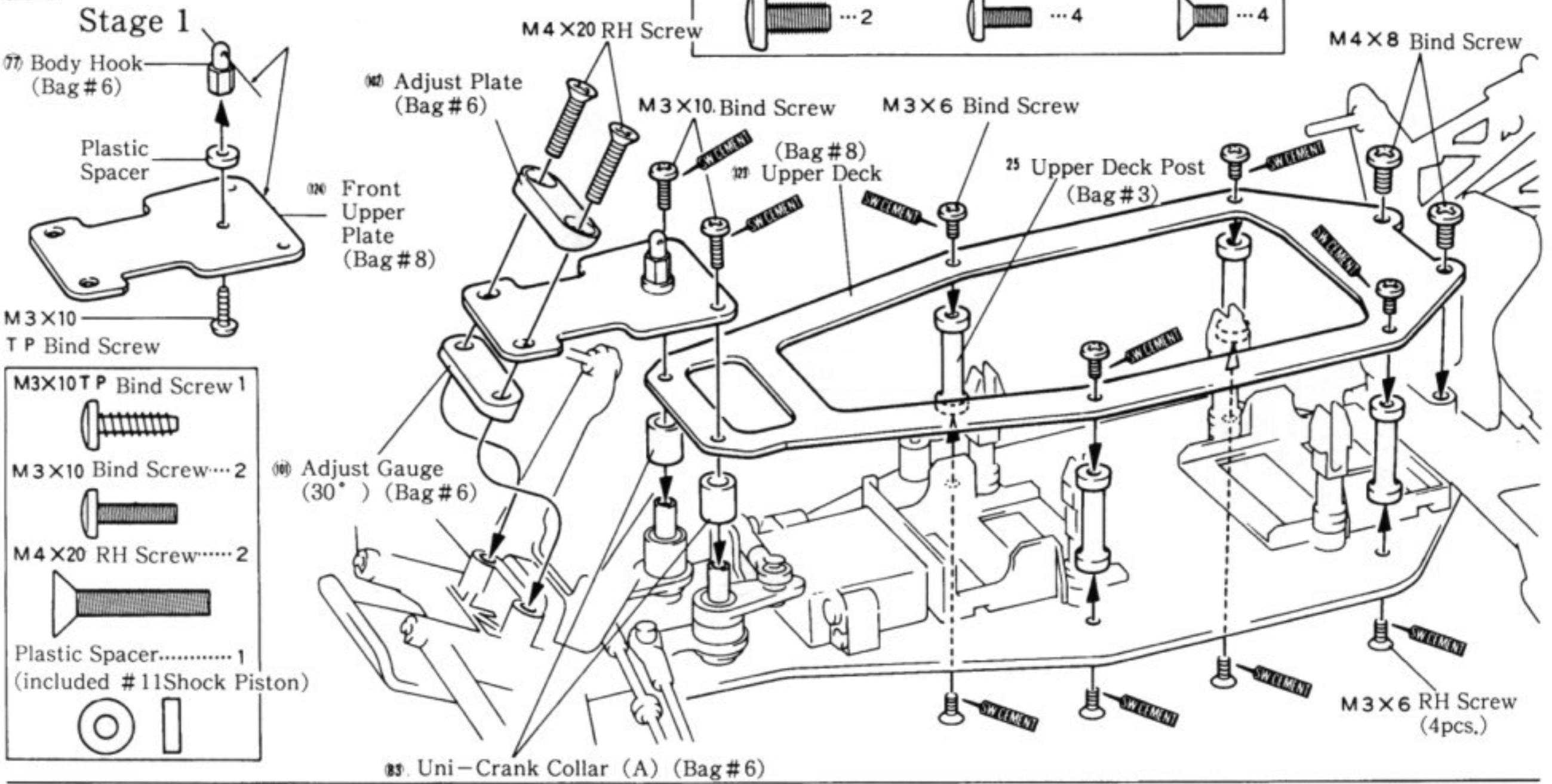
Stage 1



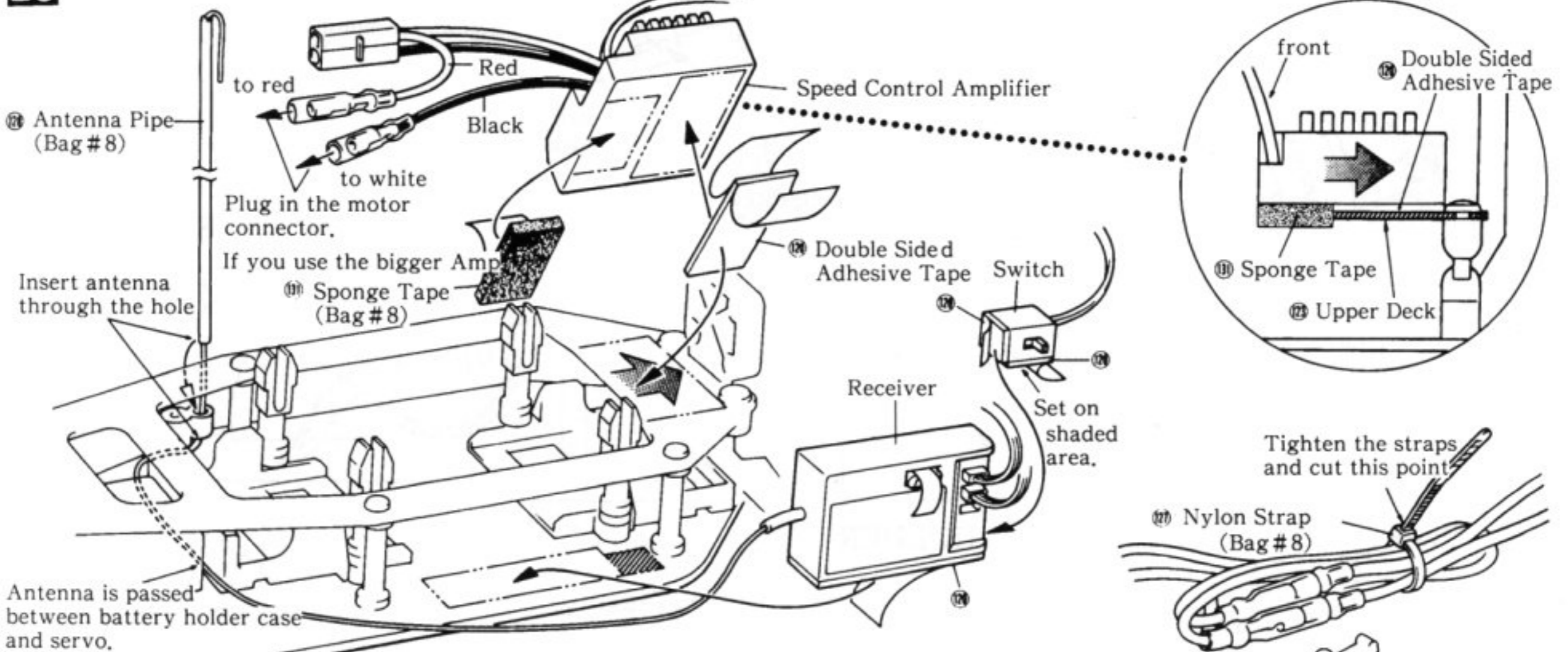
23 INSTALLATION OF BATTERY HOLDER



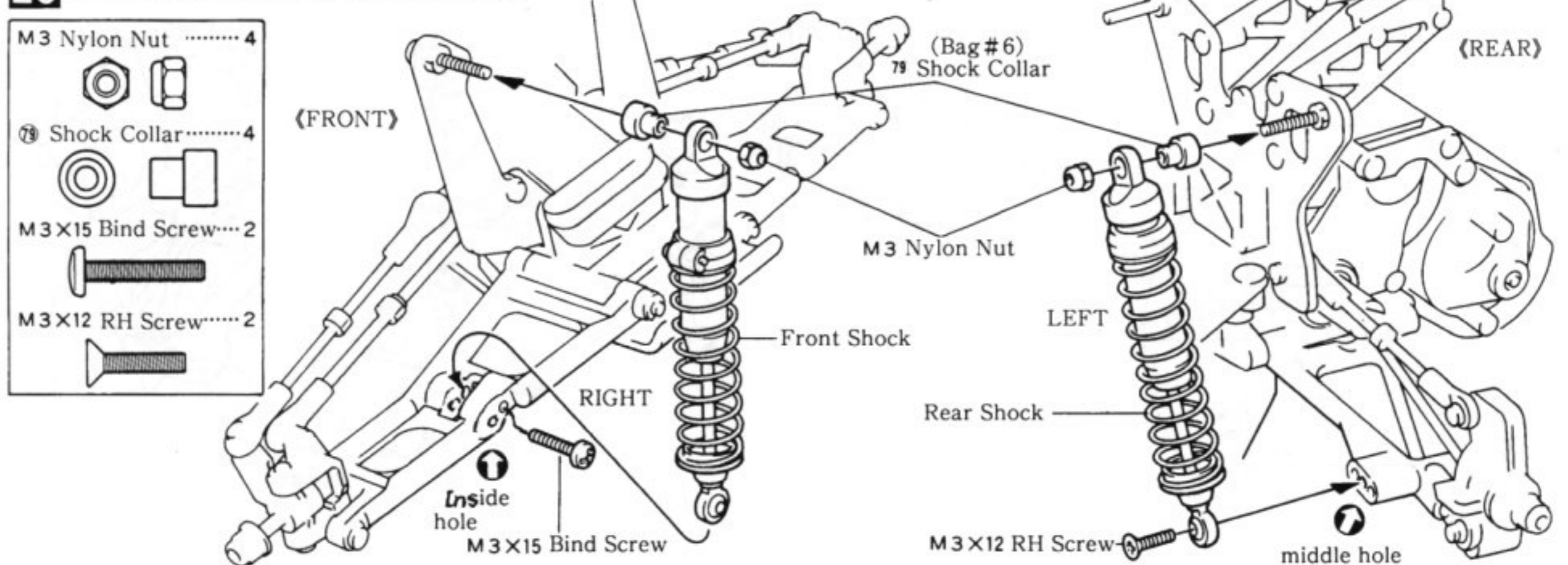
24 INSTALLATION OF UPPER DECK



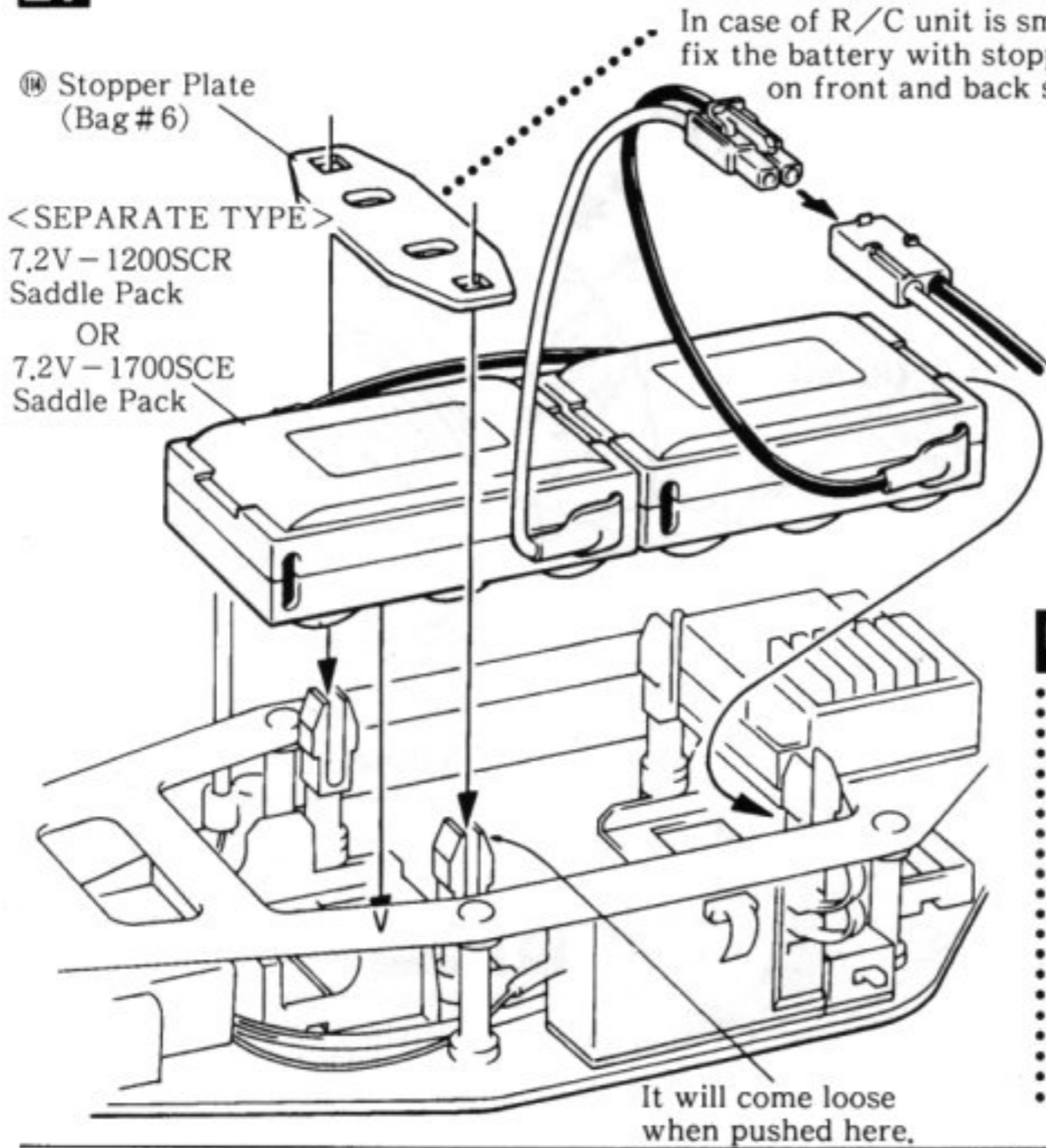
25 INSTALLATION OF R/C RADIO UNIT



26 INSTALLATION OF SHOCK



27 INSTALLATION OF BATTERY



<STICK TYPE>
7.2V - 1700mAh SCR NiCd Battery

KYOSHO



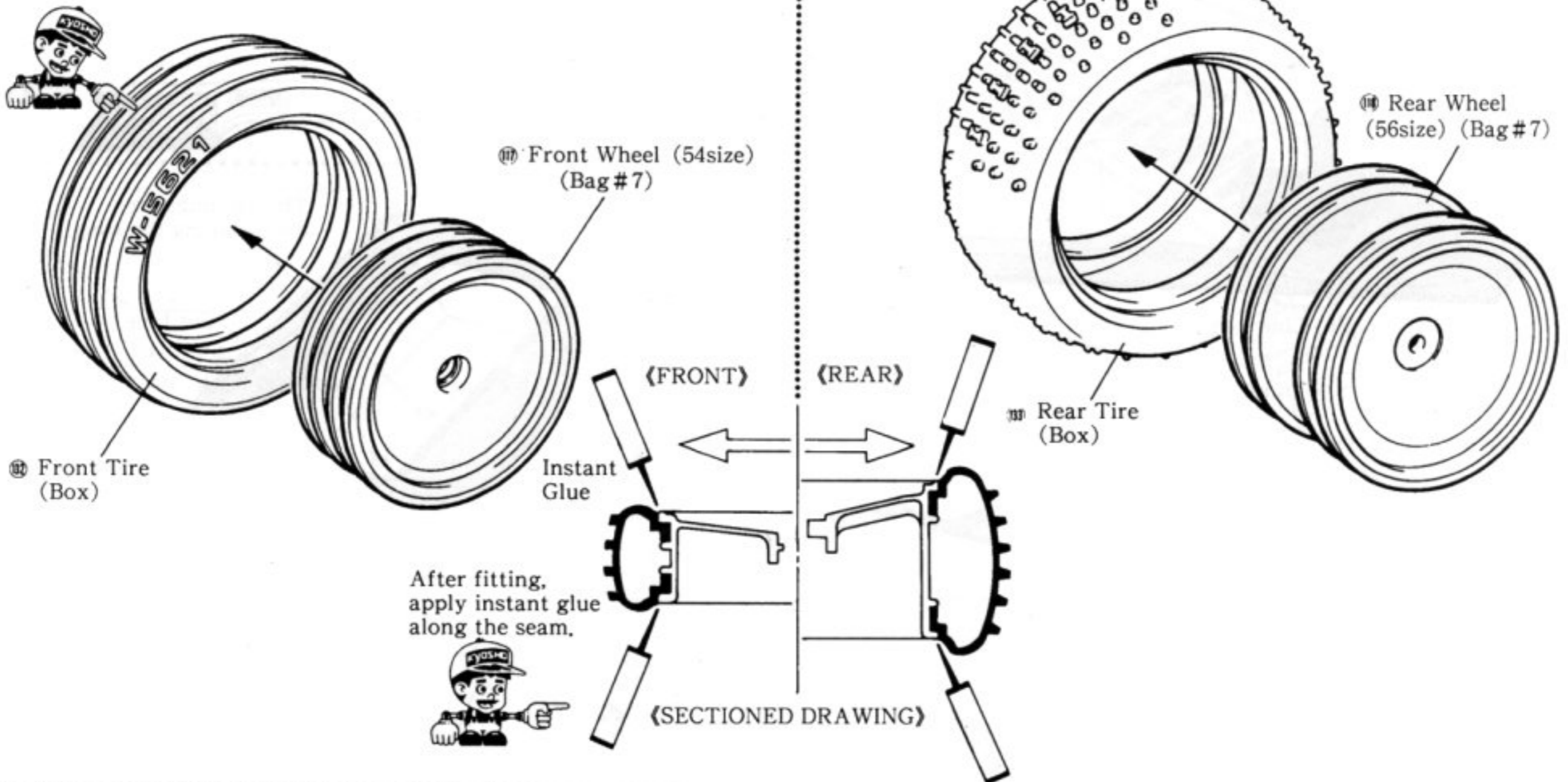
Kyosho offers the 7.2V Saddle Pack Battery which is prepared for the buggy car specially.

KYOSHO

Kyosho offers the 7.2V - 1700mAh SCR NiCd Battery which is prepared for the buggy car specially.

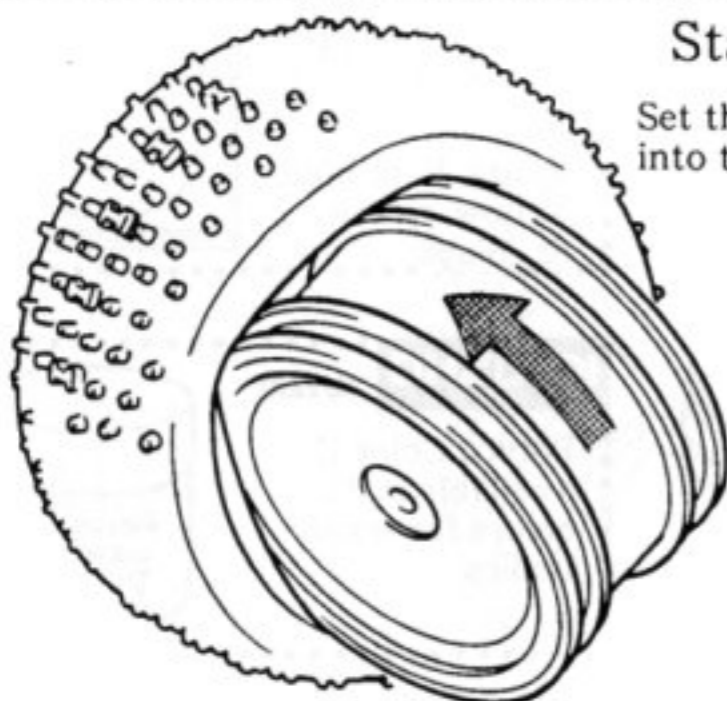


28 ASSEMBLY OF TIRE & WHEEL



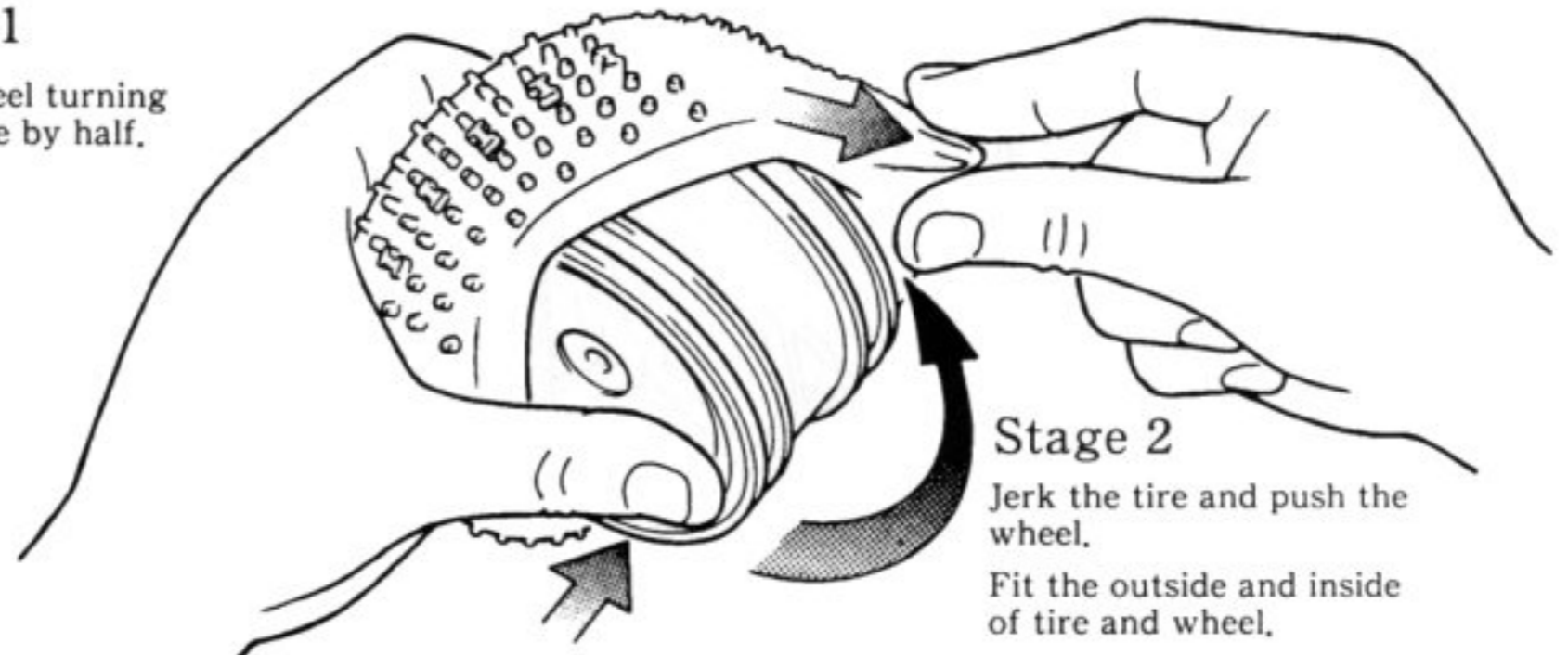
Stage 1

Set the wheel turning into the tire by half.

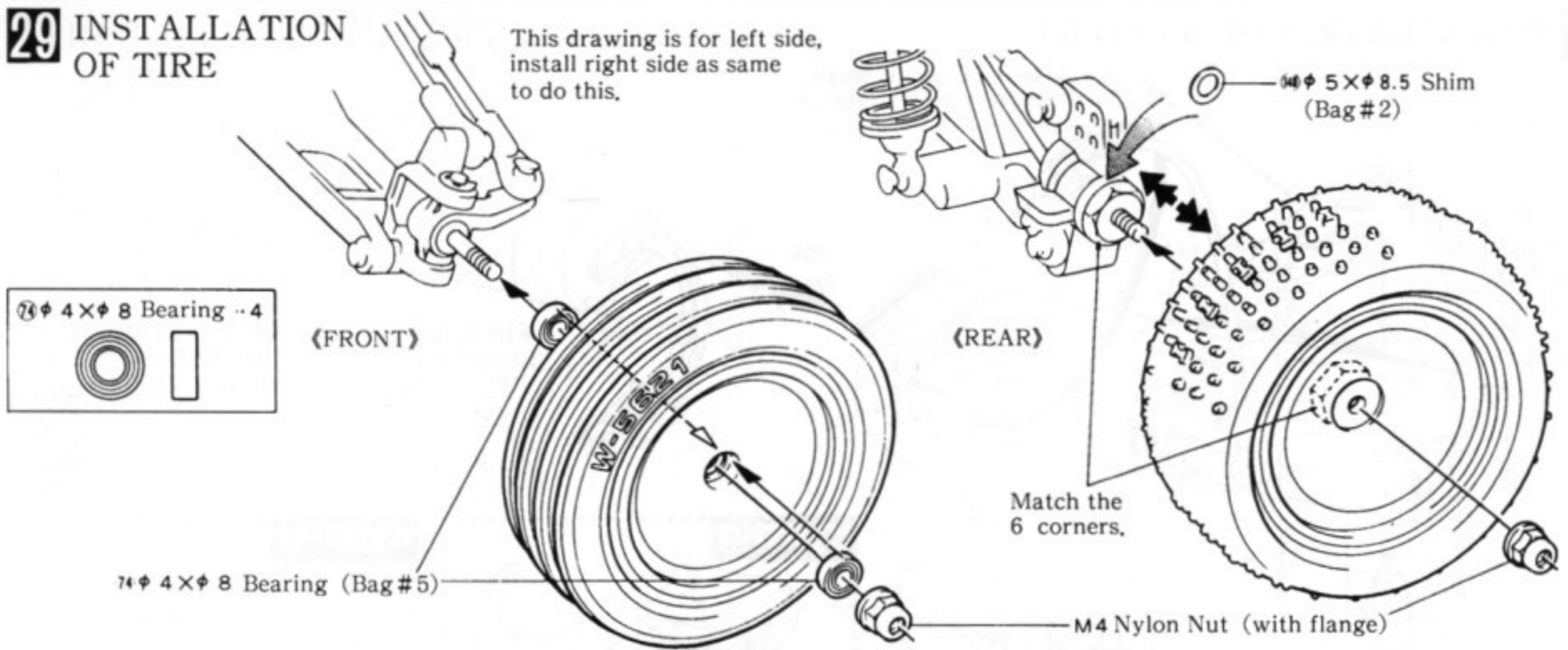


Stage 2

Jerk the tire and push the wheel.
Fit the outside and inside of tire and wheel.

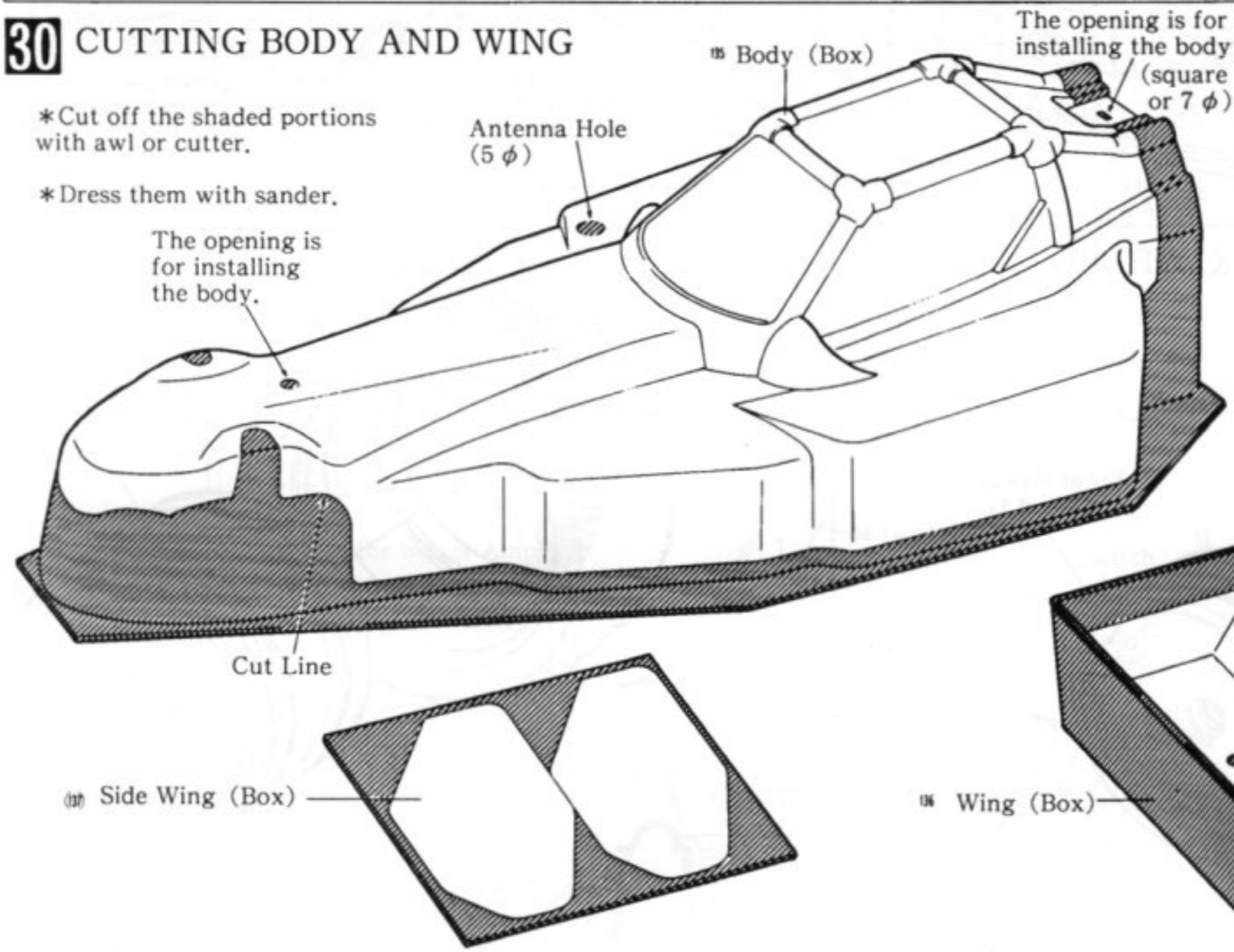


29 INSTALLATION OF TIRE



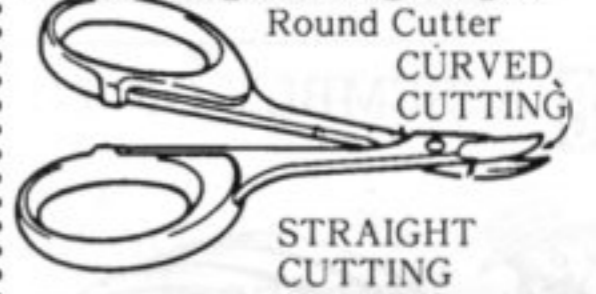
CUTTING & MOUNTING BODY 30 ~ 33

30 CUTTING BODY AND WING



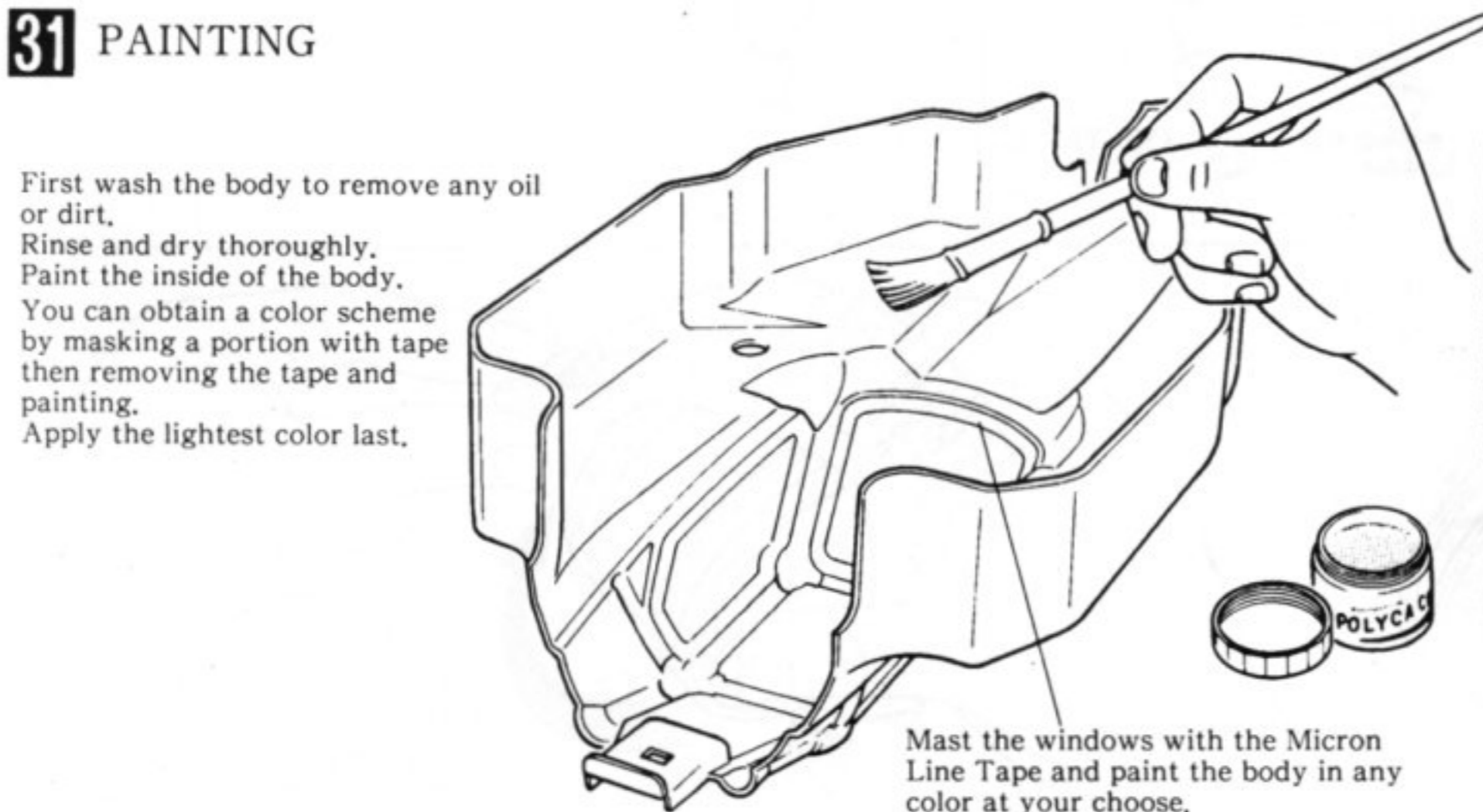
KYOSHO No 1829

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



The openings are for installing the wing.

31 PAINTING



KYOSHO

- Micron Line Tape
- # 1841...1mm
- # 1842...1.5mm
- # 1843...2.5mm
- Color
- White, Red, Blue, Yellow, Green & Black.



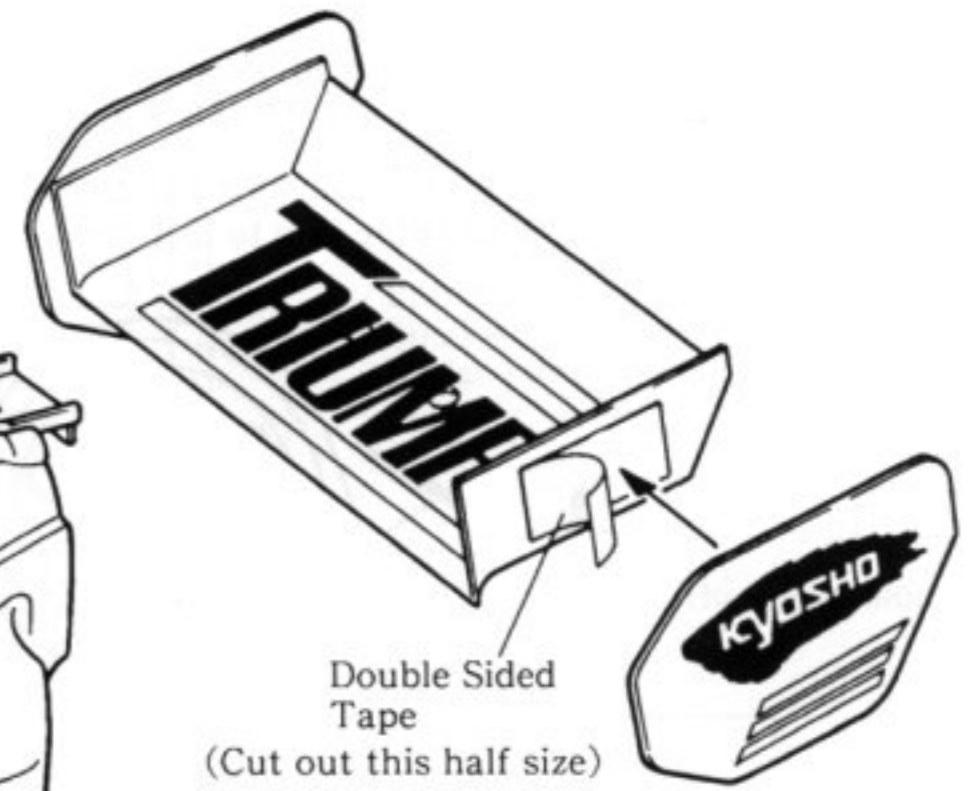
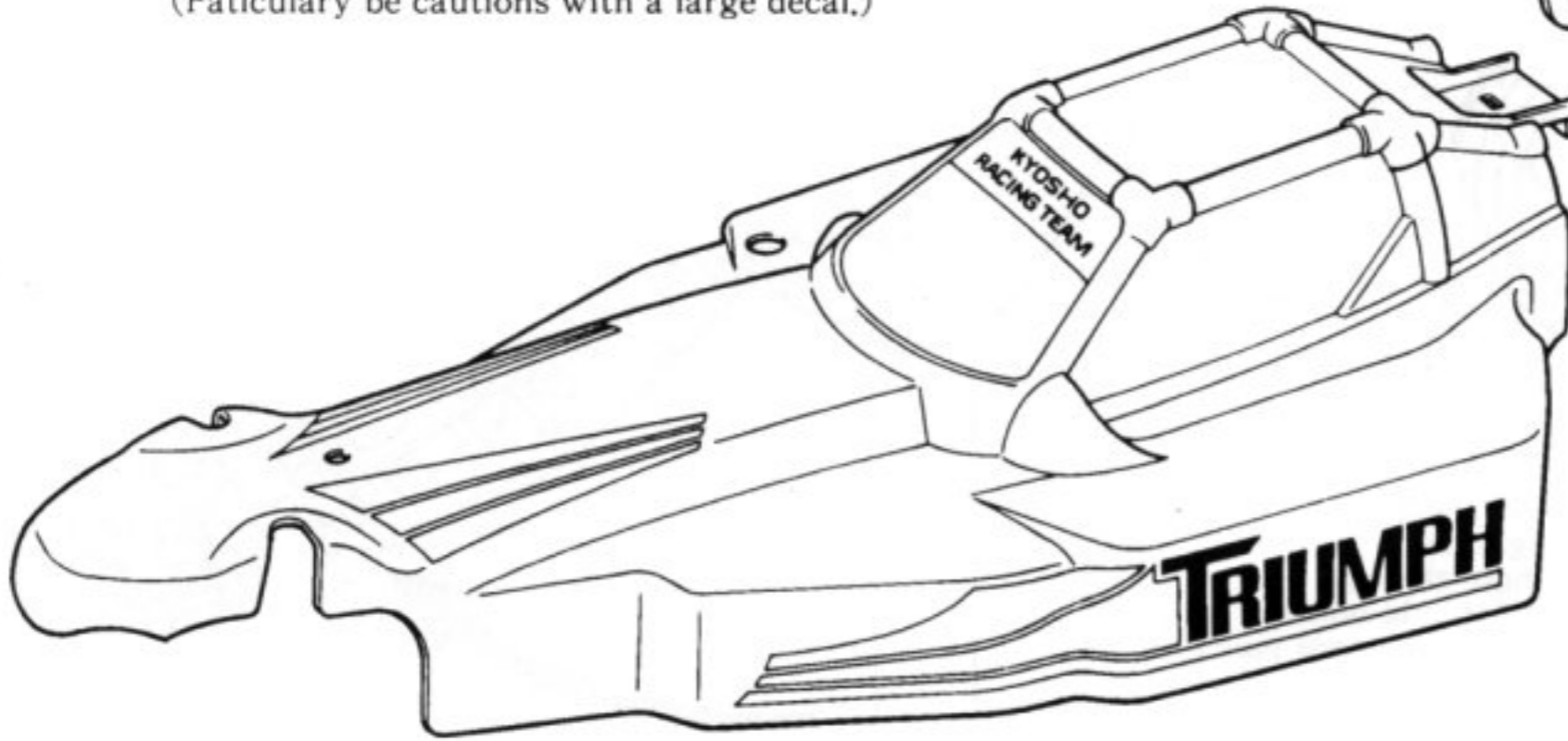
KYOSHO No 2230

- Polyca Color is available in 12 colors for lexan bodies.



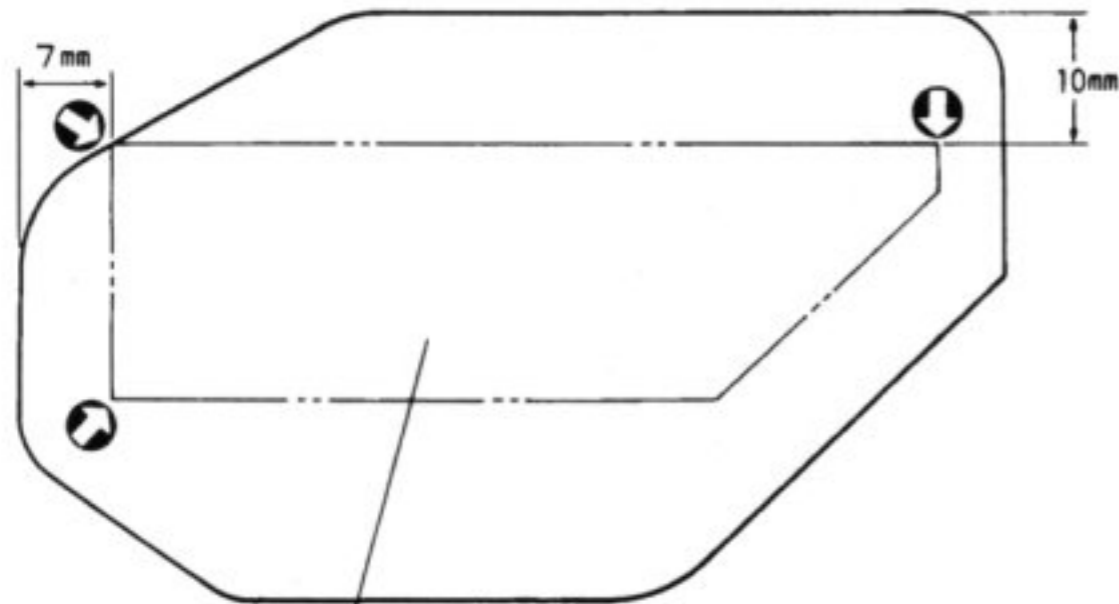
32 APPLY OF DECAL AND ASSEMBLY OF WING

- Cut off the decals along the cutout line with scissors.
- Do not apply it abruptly. Convince yourself of the position by trying the decals with the backing paper on.
- Be careful not to have air bubbles left. Try to smooth out the decal's surface from the center to the periphery. (Particular be cautions with a large decal.)



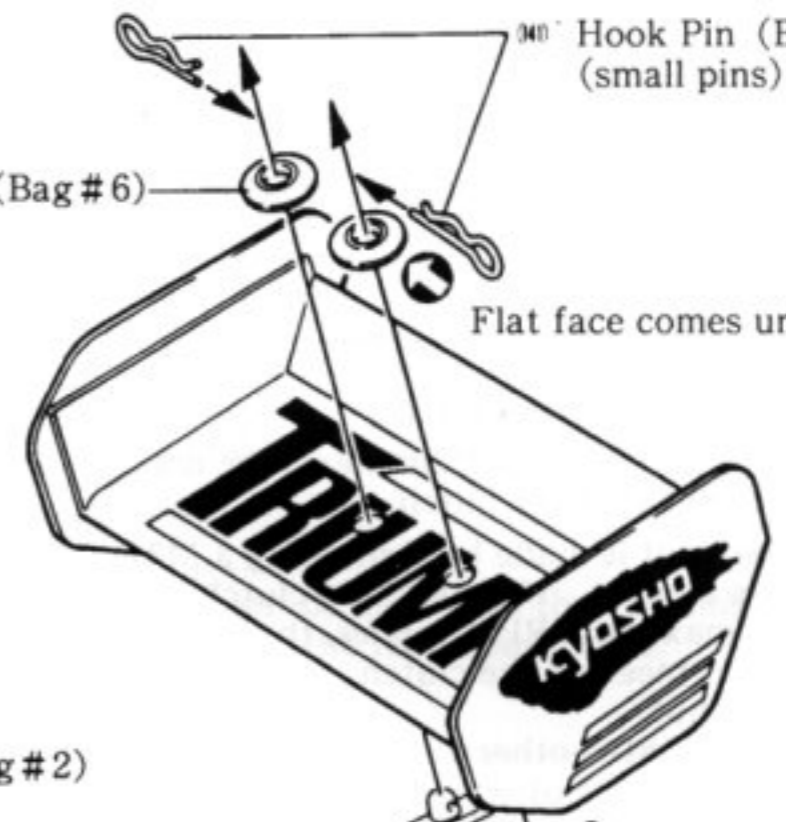
33 INSTALLATION OF BODY & WING

<< Actual Size of Side Wing >>

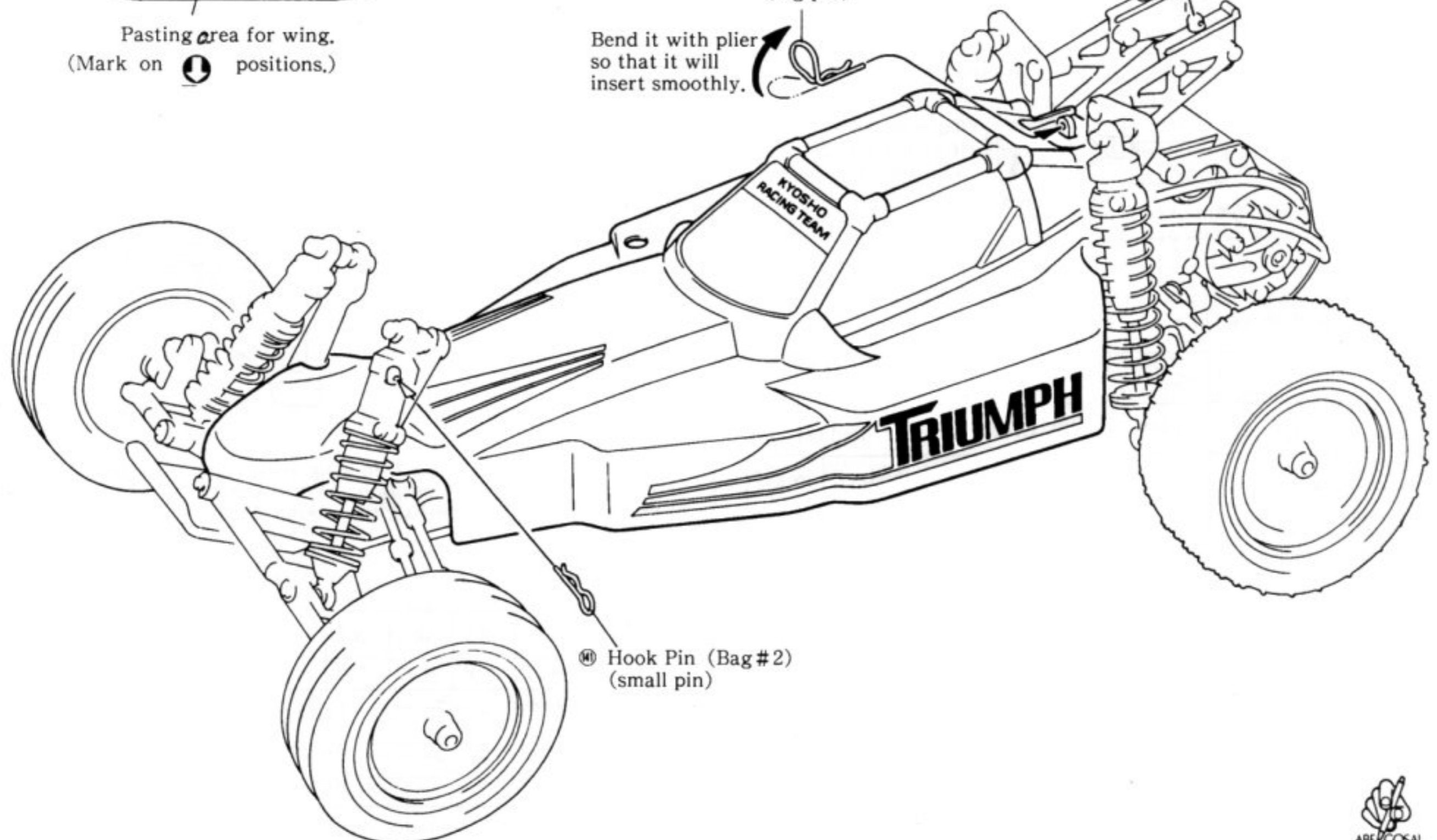


Pasting area for wing.
(Mark on positions.)

- 93 Wing Washer (Bag #6)
- 94 Hook Pin (Bag #2) (small pins)



- 95 Body Pin (Bag #2) (big pin)
- Bend it with plier so that it will insert smoothly.



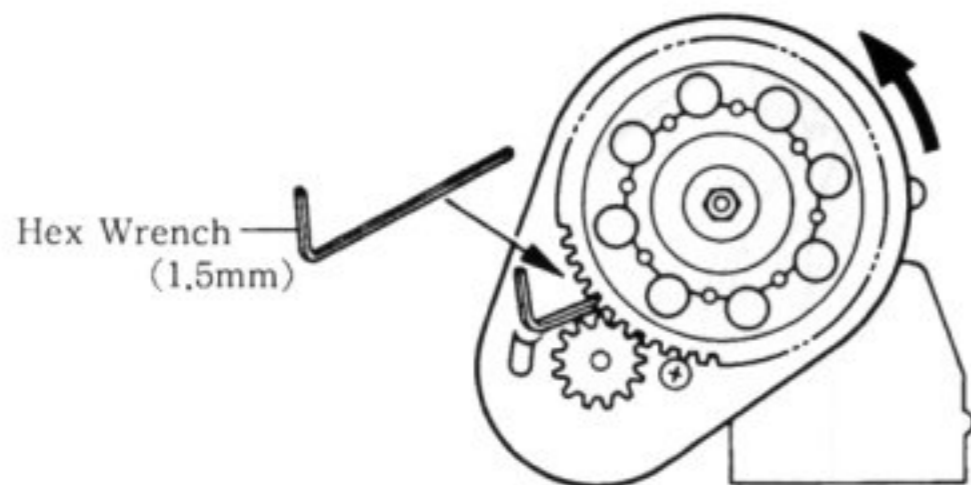
- 96 Hook Pin (Bag #2) (small pin)

ADJUSTMENT OF BALL DEFERENTIAL AFTER ASSEMBLY

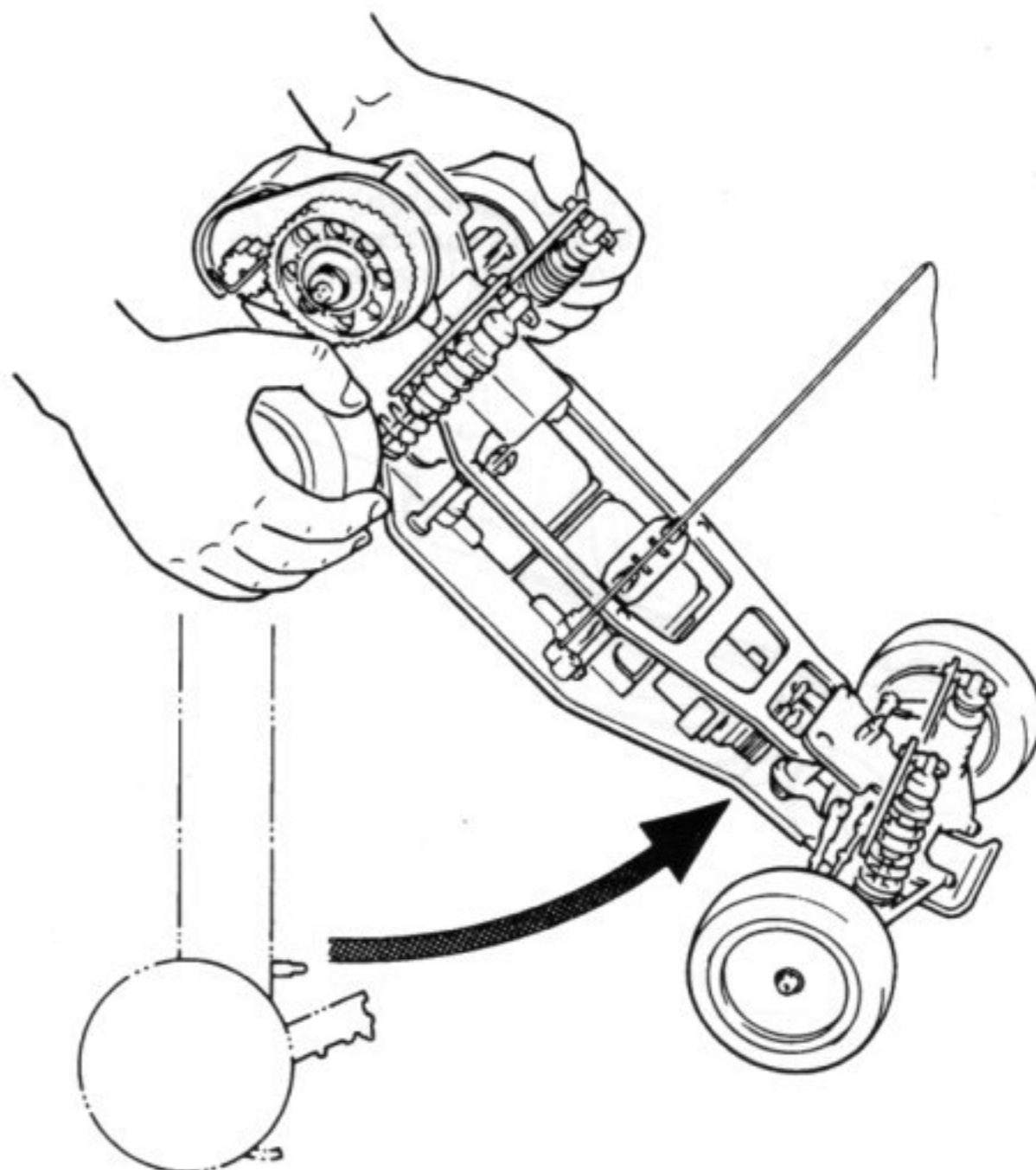
<< Adjustment of Ball Differential >>

The ball differential gear has been adjusted, but after the assembly take a look in the following ways if the cap screw is tightened properly.

- (1) Remove the gearbox cover first, then put a hex wrench (1.5mm) into where set screw on drive hub to lock them.



- (2) As you see the figure, take the rear tires by both hands, and see the angle is 45 degrees. If the angle is greater, the cap screws are overtightened. If it's less, those screws need to be tighten. In this case, disconnect the left upper rod and adjust the cap screws. (Hold the right wheel while this procedures are made)



< Maintenance >

In case you find the rough gearing on differential gear, re-assemble the part and add some grease. If the trouble doesn't go away, pressure plate and ball differential are need to be changed. The part that contains ball differential need to be changed from time to time.

SETTING GUIDE 1

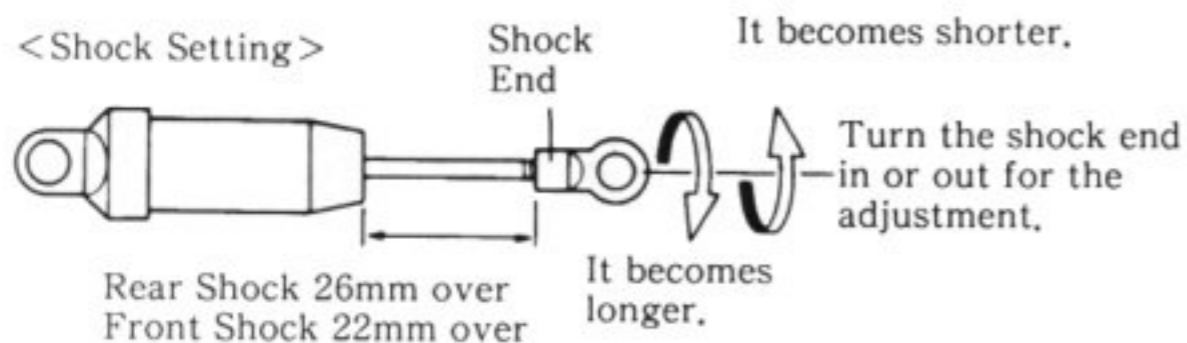
< Adjustment of Slipper Clutch >

The adjustment of slipper clutch can be made by cross wrench opening the gear cover hutch.

The adjustment is made by tightening a M3 nylon nut according customer's choice. Normally, the clutch has to have some clearance. When the maximum RPM applies, the vehicle must run a couple of feet without meeting the clutch. To achieve this, careful tighten the nut.

Do not overtighten otherwise clutch component can be damaged. Periodically change of wave washer is recommended.

< Shock Setting >



< Hardness of Shock Oil >

Item	Hardness			
	← Harder		→ Softer	
No 1951 Shock Oil (S,M,H)	Yellow Oil		Green Oil	
No 1953 Silicon Oil (S)			200 S C	100 S C
No 1954 Silicon Oil (M)		400 S C	300 S C	
No 1955 Silicon Oil (H)	600 S C	500 S C		

< Suspension Setting >

The clearance can be adjusted by suspension springs. Normally, the chassis are placed slightly above the horizontal line that through the center of wheels. The front end adjustment... The chassis are placed slightly (3mm) below the horizontal line that through the center of wheels. (When this adjustment is made, the kit has to be completed.)

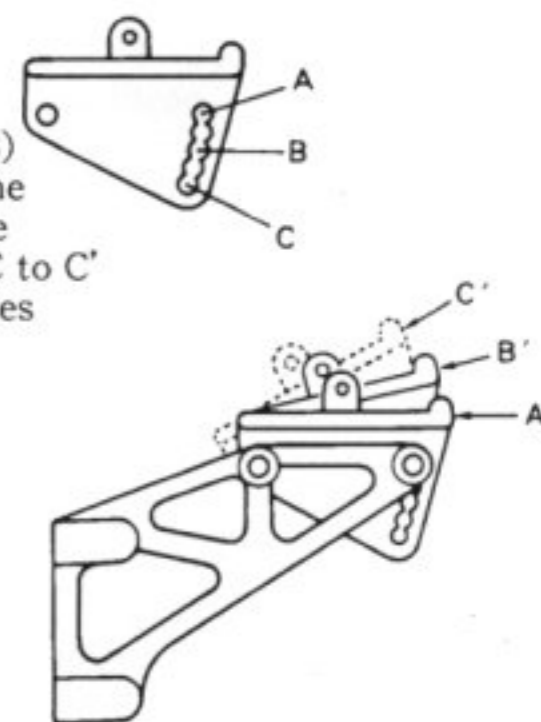
< Maintenance of Shock Absorbers >

When the oil is changed periodically, they give you the steady performance. When you change the oil, clean the cylinder inside, too.

Try move the piston while the cylinder is empty. When you find a roughness, it is time to change the O Ring.
W-5017 Pressure Top Set for Pressure Shock
W-5018 O Ring Set for Pressure Shock

< 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.



(Step Up)

Wing effect becomes bigger when wing angle is in C position, and becomes smaller in A position. When the course is bad grip or jumping style of car is bad, the around C position will be nice adjustment.

< Gear Ratio >

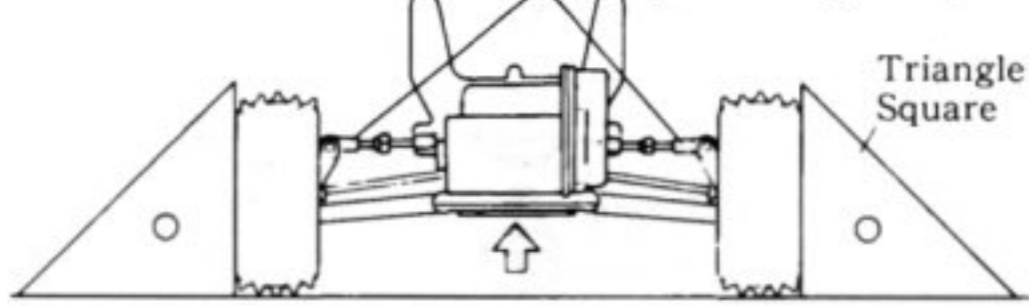
Pinion Gear	17T	18T	19T	20T	21T	22T	23T	24T	25T
Gear Ratio	13.03	12.30	11.65	11.07	10.54	10.06	9.63	9.23	8.86
	Slower	←		Top Speed	→		Higher		
	Better	←		Acceleration	→		Reduce		
	Longer	←		Run Times	→		Shorter		

Adjust gear ratio due to motor and course size.

SETTING GUIDE (2)

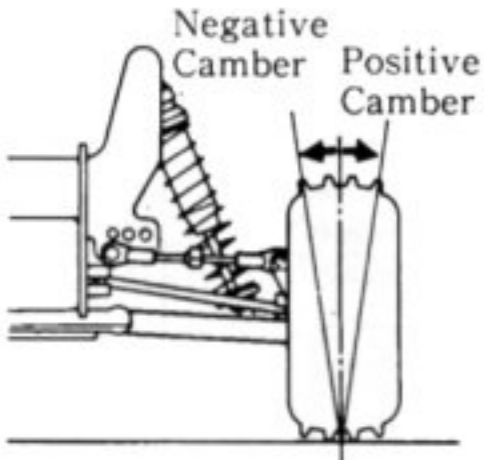
< BASIC SETTING >

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

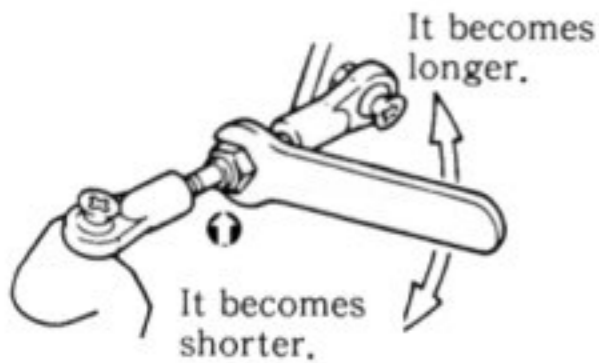


< UPPER ROD ADJUSTMENT >

Basically the adjustment can be made by moving the hexagon nut that is placed at the center of the rod, clock wise. At first, find out the ideal tires for specific track. Then, run the car. If the front tires unsteady, adjust the rear upper rod clock wise 1/6 turn. Repeat this until you find the ideal position. In case the front end is himmy, turn the nut counter clock wise.



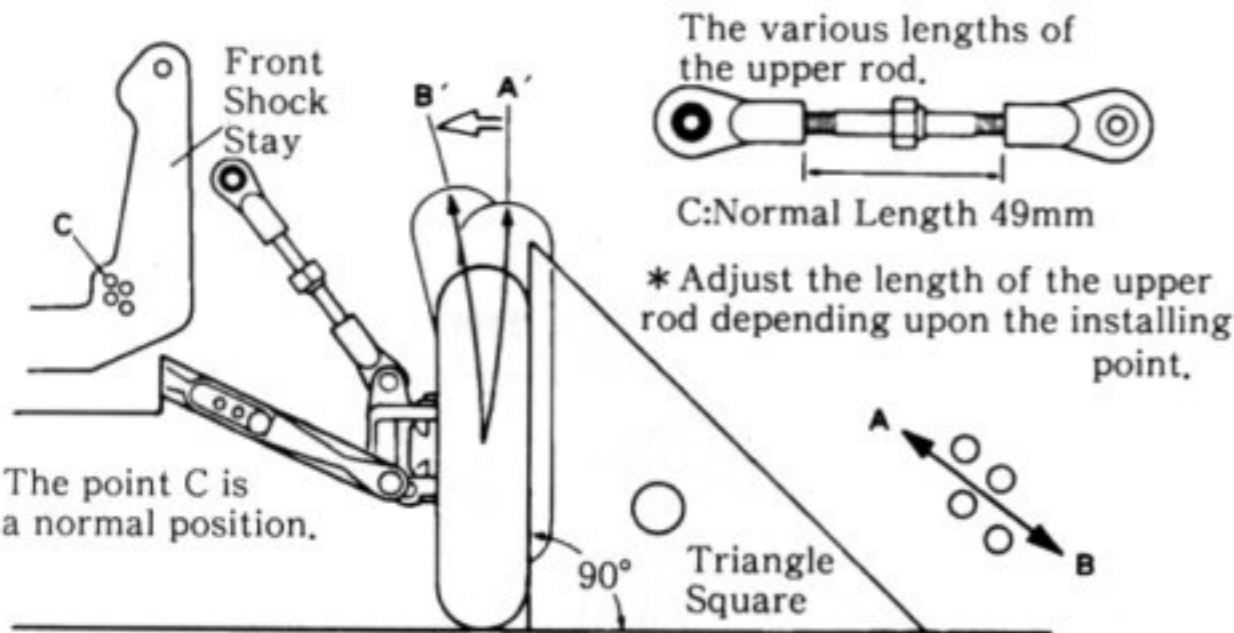
< UPPER ROD ADJUSTMENT >



It can be adjusted in the way left picture.
(Tie Rod can be adjusted in the same way upper rod.)

< CORRELATION BETWEEN INSTALLING OF FRONT UPPER ROD AND CAMBER ANGLE >

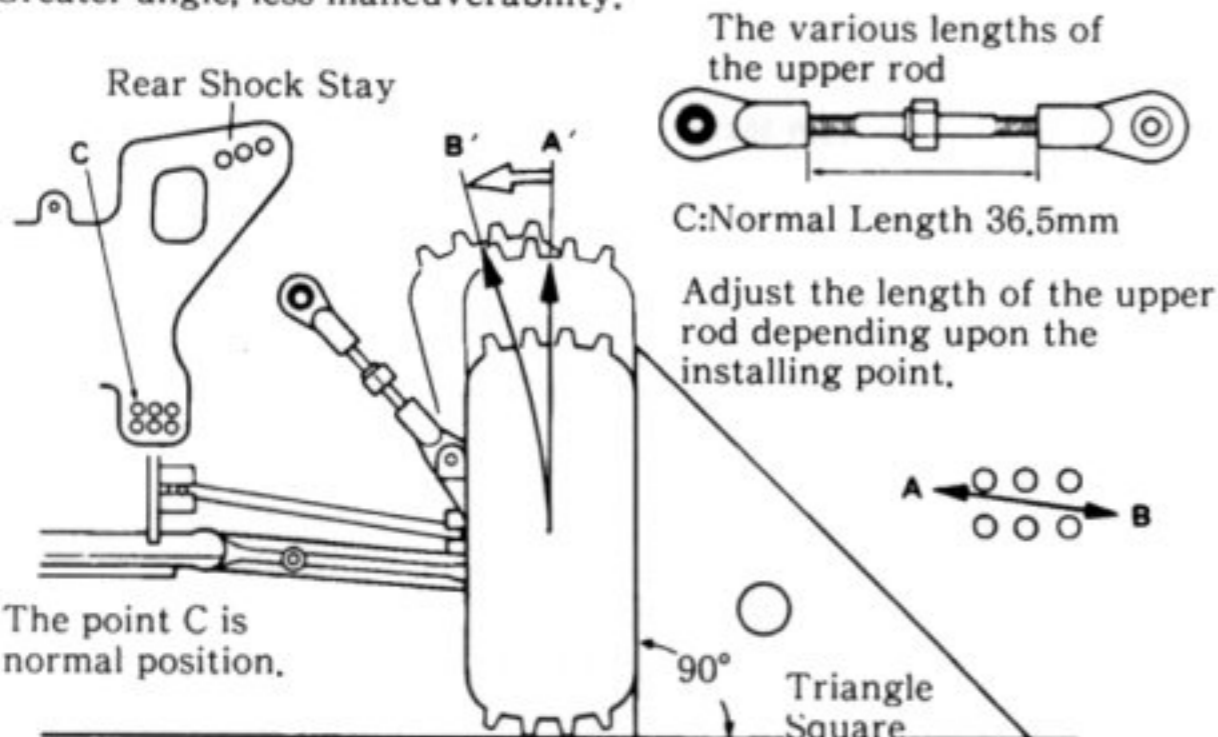
The installing points A and B on the front shock stay for the upper rod correspond to A' and B' which are the maximum camber angle when the front suspension arms swing down to the lowest position.



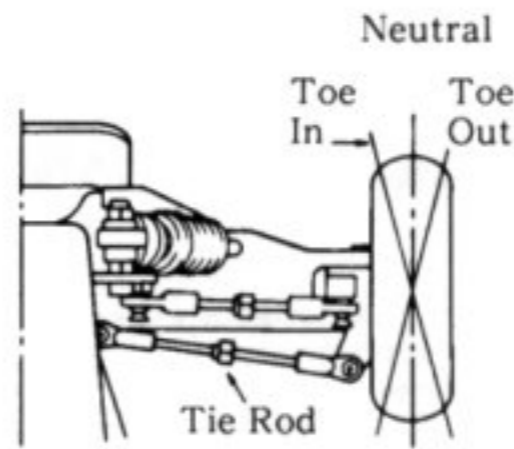
< CORRELATION BETWEEN INSTALLING POSITION OF THE REAR UPPER ROD AND CAMBER ANGLE >

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.

Less angle, greater maneuverability.
Greater angle, less maneuverability.



< TOE-IN ANGLE >

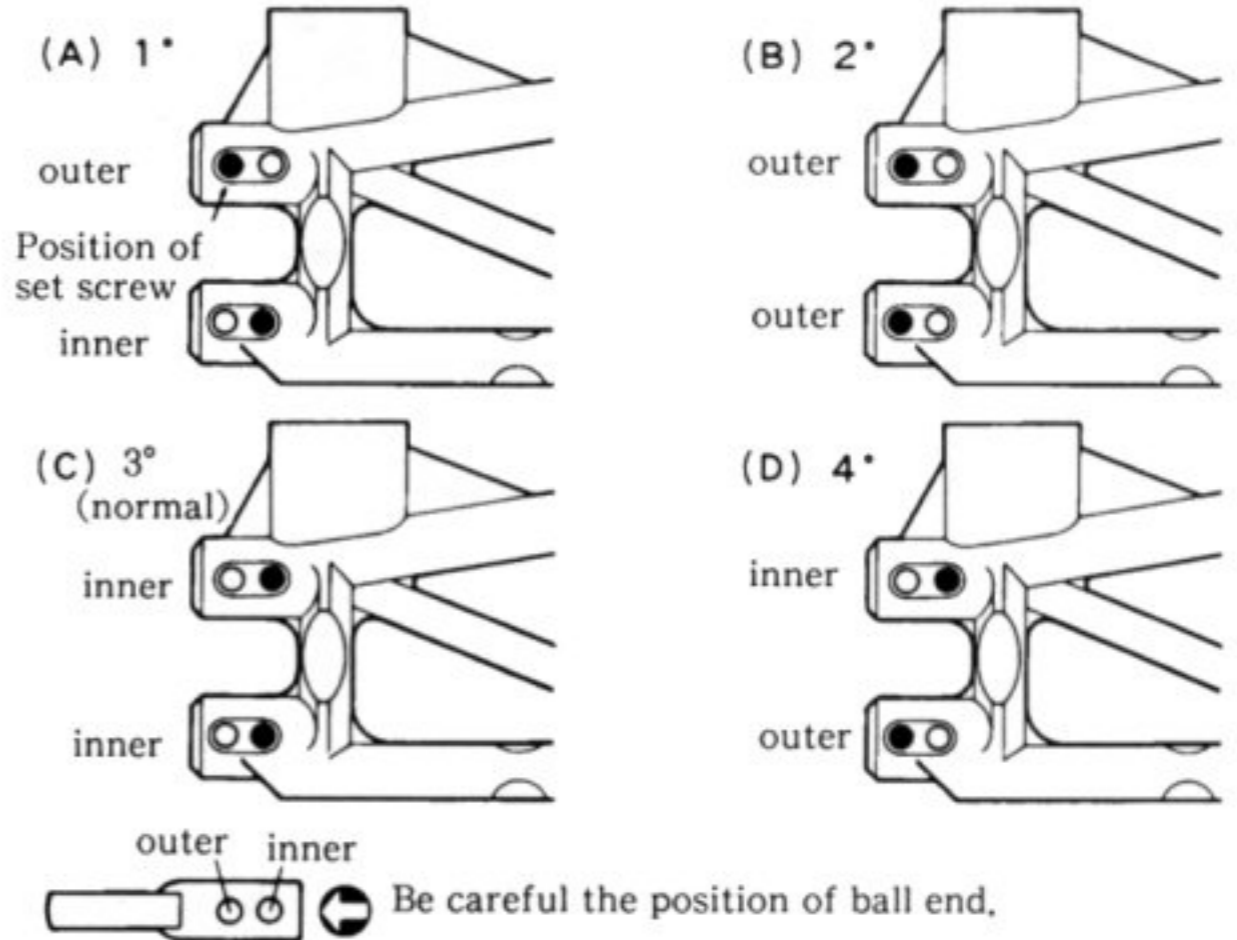


* Adjust the tie rod longer.
Become toe-in
Slower response
Over steer

* Adjust the tie rod shorter.
Become toe-out
Quicker response
Under steer

< ADJUST REAR TOE-IN ANGLE >

The 4 steps of adjustment can be made by replacing the suspension arms by M3x10 set screws.



< SETTING OF TIRES >

Any of the tires listed below can be used with the "Triumph". Choose the one most suitable for the road conditions.

Tire List

Standard Road			
soft road surface		hard road surface	
WET	DRY	WET	DRY
W-5641 S H-Pin S	W-5641 M H-Pin M	W-5642 S Micro Block S	W-5642 M Micro Block M
..... : There are sand on the surface.			
Asphalt, Lawn			

The RWD car, such as TRIUMPH, road surface holding by rear tires is essential.

< ADJUSTMENT OF FRONT SKID ANGLE >

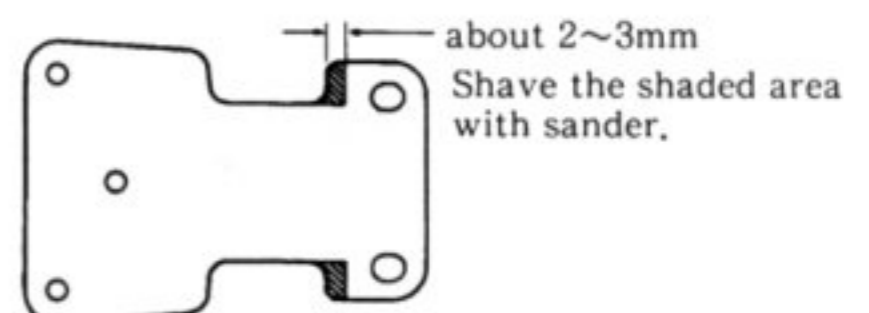
This kit comes with 30° skid angle, but it may be changed by optional parts. (Choice of 25° and 20°)

* With 25° Skid Angle

Disconnect the front upper deck and adjustable portion which has original 30°. And replace with an adjustable portion that has angle of 25°

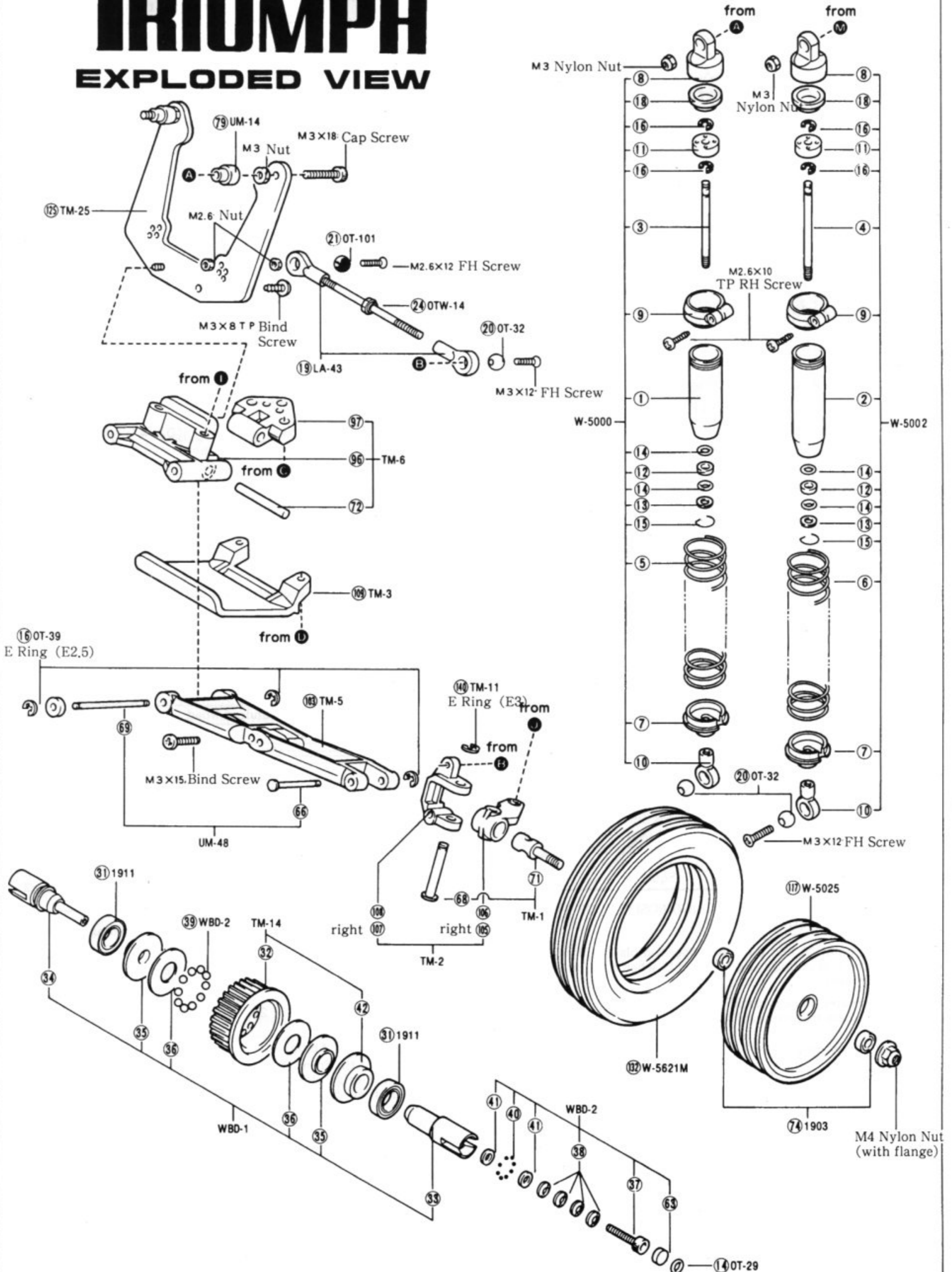
* With 20° Skid Angle

Replace the same portion, but additional procedure has to be done as figure shows.

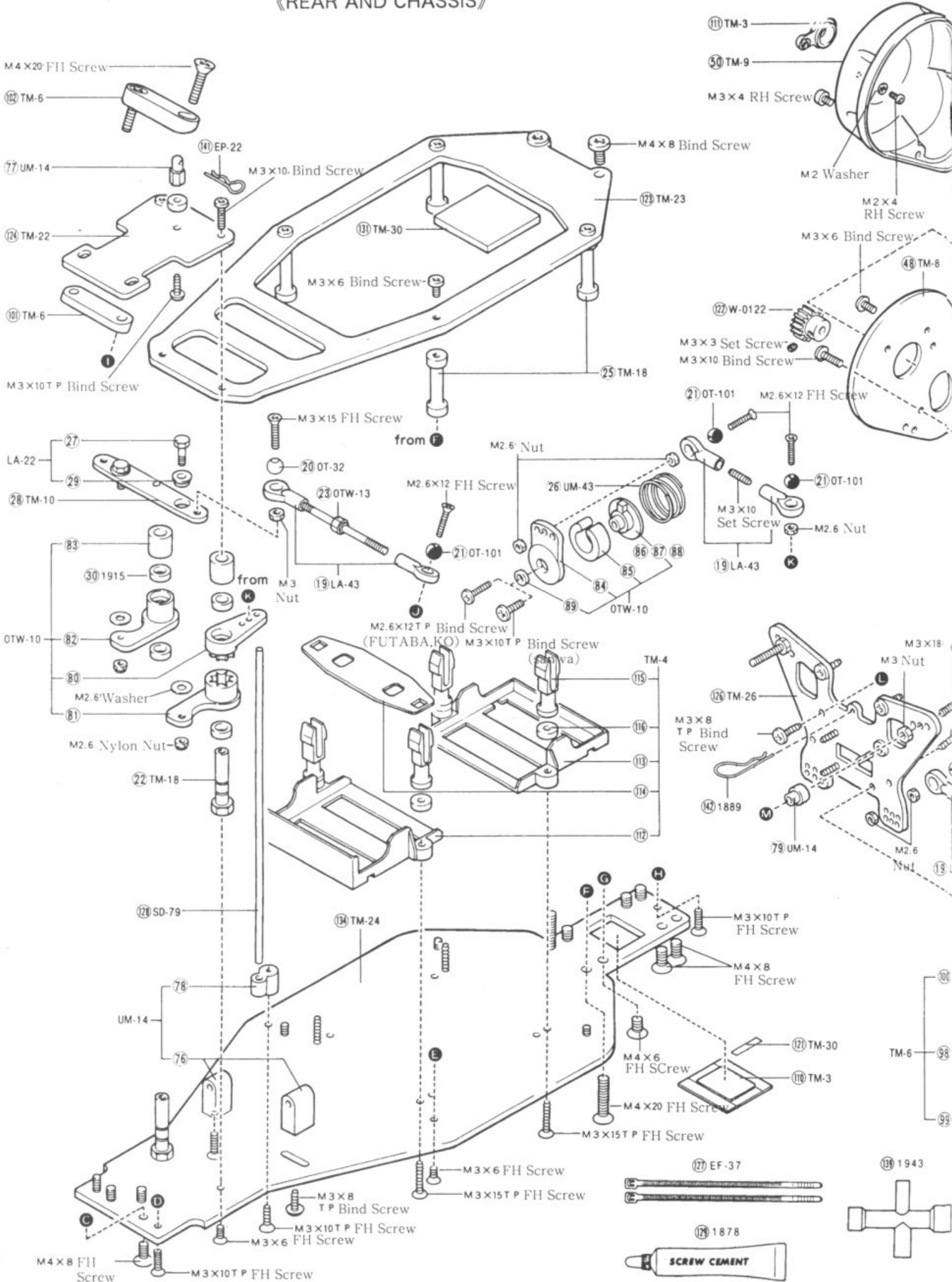


TRIUMPH

EXPLODED VIEW



《REAR AND CHASSIS》



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