

RADIO CONTROLLED 10 ENGINE POWERED 4WD RALLY CAR

# PEUGEOT 405

- EPOCH MAKING GAS ENGINE POWERED CAR, EASY TO HANDLE MORE THAN ELECTRIC CAR.
- SHAFT DRIVE 4WD RALLY CAR, CAPABLE TO GO EITHER ON-ROAD AND OFF-ROAD.
- WINNER OF PARIS • DAKKAR RACE MADE IN TO MODEL.
- DOUBLE WISH BONE FOUR WHEEL INDEPENDENT SUSPENSION SYSTEM WITH NEW OIL SHOCKS.
- SEMI-READY-TO RUN CAR KIT WITH ENGINE AND DRIVE SYSTEM ASSEMBLED IN THE FACTORY.
- KIT INCLUDES SPECIAL MUFFLER, FUEL TANK, PLUG HEATING BOX ( 4D-SIZE DRY CELLS.)
- FUEL AND 2 CHANNEL RADIO ARE NOT INCLUDED.

1:10 SCALE



**KYOSHO**  
THE FINEST RADIO CONTROL MODELS

◀ KIT NO. 3014 ▶



## 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 startings of the assembly.

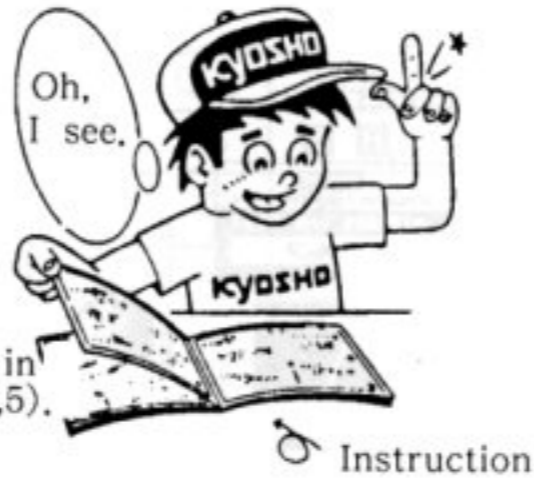


Any claims for replacements or refunds for the model in the process of assembly will not be accepted.

○ Learn the marks described in the instruction.

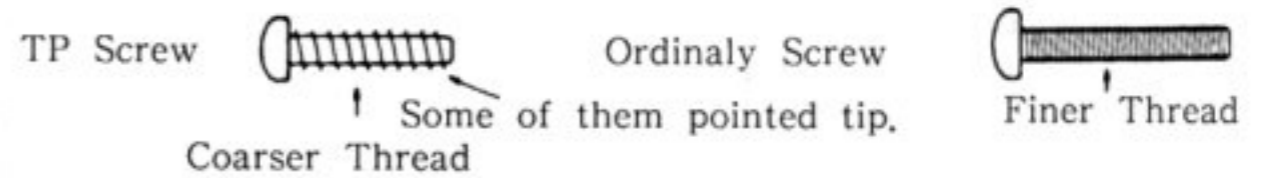
**SW-CEMENT** ... Place to put some locktite. It will prevent the screws and nuts get loosen by vibration while running.

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

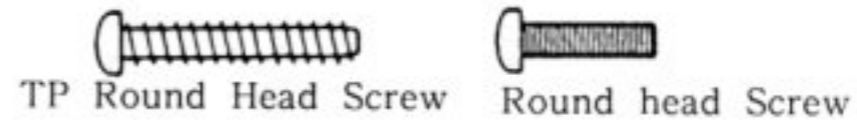


Be well aware of the different types of screws.

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



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



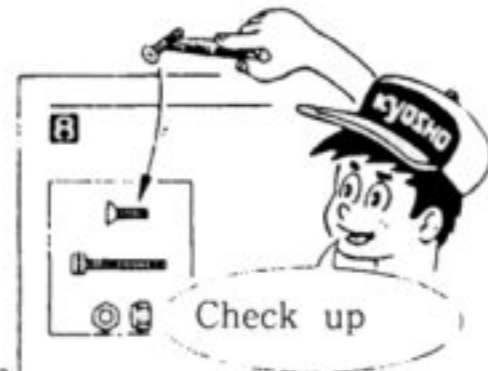
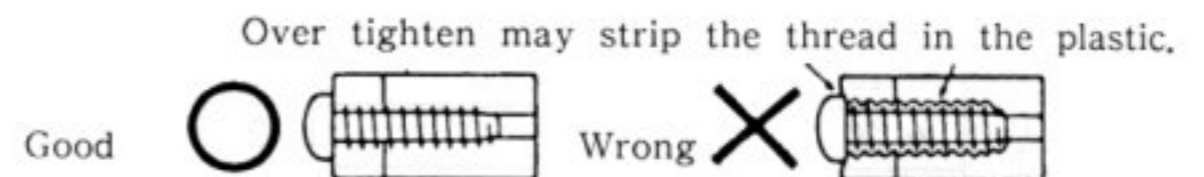
○ Pick up the correct parts and screw. Compare the shape and size of small parts, such as screw, nuts, and washers.

○ 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 screw, 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.

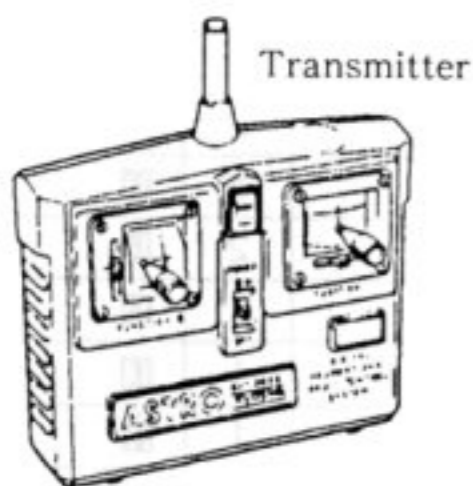


## THINGS NEED BESIDES THE KIT

< 2 Channel Radio System >

Two types of radio control set are on the market, the stick and the steering wheel type.

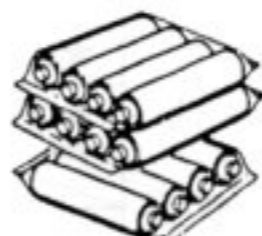
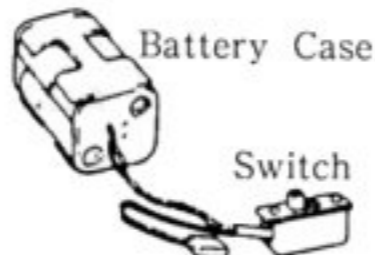
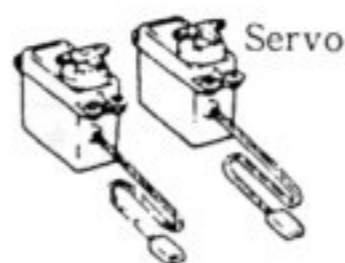
Choose which ever you like.



AA Size Battery

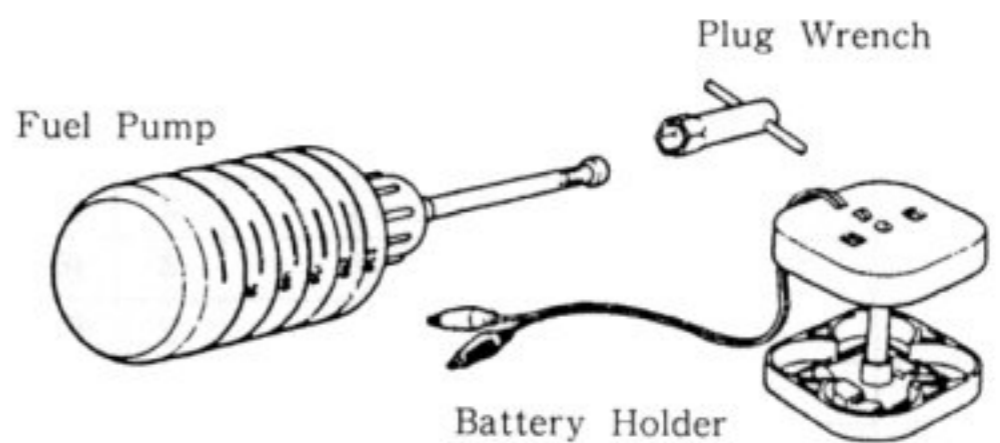
For Transmitter...8 pcs.

For Receiver...4 pcs.



## Things need to start engine

[Included with the kit]



[Not included with the kit]

Glow Fuel

\* Gasoline or kerosene cannot be used.

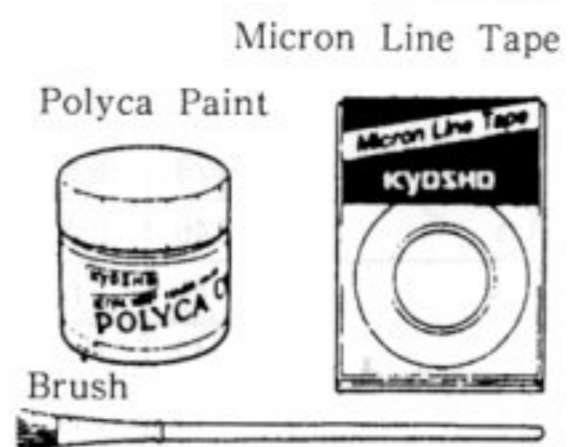
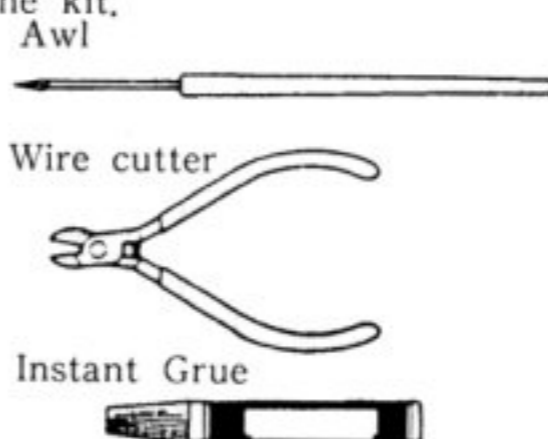
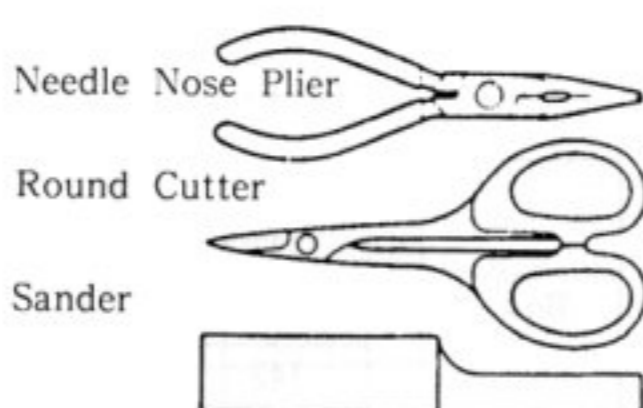
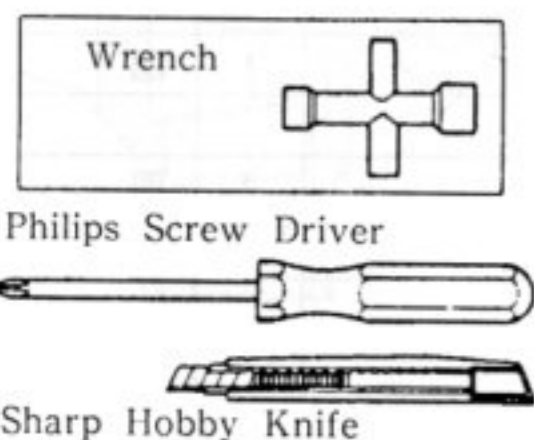


[Not included with the kit]

4 Unit #1 (D-size) Dry cells



< Tools Required > Wrench, A Hex Key, Grease and SW-Cement are in the kit.



# LIST OF BAGGED PARTS (1)

The key numbers with ★ indicate the plastic parts on a runner.  
See page 5 for the layout drawing.

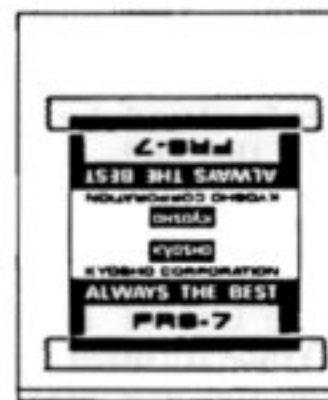
《Do not throw away a bag header》

- The symbol in the brackets after a name of parts in this instruction is the header number in which the part is contained.
- The header is the only thing to rely upon when looking for a part. Do not discard it until you finish the assembly.

Header



or



Keep it in the bag. Affix it on the bag with tape.

Bag No.	Key #	Parts Name	Q'ty	Step
Blister		Chassis Assembly	1	4
FRS-1 Front Shock Parts	24	Front Shock Case	2	1
	★ 26	Shock Cap	2	2
	27	Shock Ring	2	2
	★ 28	Spring Holder	2	2
	★ 29	Spring Spacer	2	2
	30	Pressure Top	2	2
	★ 31	Shock Piston	2	1
	32	Front Shock Piston	2	1
	34	Shock End	2	1
	35	Front Shock Spring	2	2
	108	E Ring (E-2,5)	4	1
	139	Shock Oil	1	2
	145	Shock Bush	2	7
	FRS-2 Rear Shock Parts	25	Rear Shock Case	2
★ 26		Shock Cap	2	2
27		Shock Ring	2	2
★ 28		Spring Holder	2	2
★ 29		Spring Spacer	2	2
30		Pressure Top	2	2
★ 31		Shock Piston	2	1
33		Rear Shock Shaft	2	1
34		Shock End	2	1
36		Rear Shock Spring	2	2
108	E Ring (E-2,5)	4	2	
145	Shock Bush	2	11	
FRS-4	4	Front Wheel Shaft	2	3
	5	Swing Shaft	4	6 10
	6	Drive Washer	4	12
	7	Joint	4	4 9
	37	Rear Wheel shaft	2	8
	38	Knuckle Arm (R)	1	3
	39	Knuckle Arm (L)	1	3
	40	King Pin	4	3
	121	5 φ x10 Plain Bearing	8	3 8
	FRS-5	45	Sus. Shaft (A) (Silver)	2
46		Sus. Shaft (B) (Black)	2	3
47		Sus. Shaft (C)	2	4
48		Sus. Shaft (D)	2	9
53		M2,6 Pillow Ball (Black)	2	3
54		M3 Pillow Ball (Silver)	12	4 6 9 10
56		Ball End Rod	6	5
79		5,8 φ Ball	2	5
146		Front Sus. Plate	1	4
FRS-6		41	Front Hub (R)	1
	42	Front Hub (L)	1	3
	43	Front Sus. Arm	2	4
	44	Rear Sus. Arm	2	8

Bag No.	Key #	Parts Name	Q'ty	Step
FRS-6	55	Ball End	12	5
	65	Joint Collar (Short)	1	14
	77	Rear Hub (L)	1	8
	78	Rear Hub (R)	1	8
	80	Servo Mount	4	16
FRS-7	57	Adaptor Pipe	1	16 Page
	110	Tail Pipe	1	16
	111	Air Filter Element	1	16 Page
	112	Element Holder	1	*
	113	Element Cover	1	*
	115	Throttle Rod	1	18
	116	Linkage Rod	2	18 19
	117	2 φ Linkage Guide	1	18
	118	3 φ Linkage Guide	1	6
	119	Rod Stopper	2	18
	126	Strap (L)	1	17
	130	Antenna	1	17
	136	Plug Wrench	1	16 Page
	140	Battery Holder	1組	15 Page
	141	Battery Holder Collar	2	*
161	Strap (S)	2	18	
FRS-8	3	Wheel	4	17
FRSP-9	★131	Snap	2	13
	★132	Body Hook Washer	2	13
	133	Body Hook Spring	2	13
	★134	Front Body Hook	2	13
	★135	Front Body Stay	1	13
	★148	Body Washer	2	23
	★149	Rear Body Hook	2	14
	★150	Body Hook Joint	2	14
	★151	Rear Body Stay (R)	1	14
	★152	Rear Bdoy Stay (L)	1	14
	★155	Door Mirror (R)	1	22
	★156	Door Mirror (L)	1	22
	157	Wing	1	22
	★158	Wing Under Stay (R)	1	22
	★159	Wing Under Stay (L)	1	22
	M2,6x6 TP Bind Screw	4	14	
	M3x6 TP Bind Screw	2	22	
	M3x25 TP Bind Screw	2	13	
	M3x35 Round Head Screw	1	14	
129	Antenna Holder	1	16	
Box	2	Tire	4	12
	137	Body	1	20
	138	Fuel Pump	1	15 Page
	142	Decal	1	22
		Instruction Manual	1	

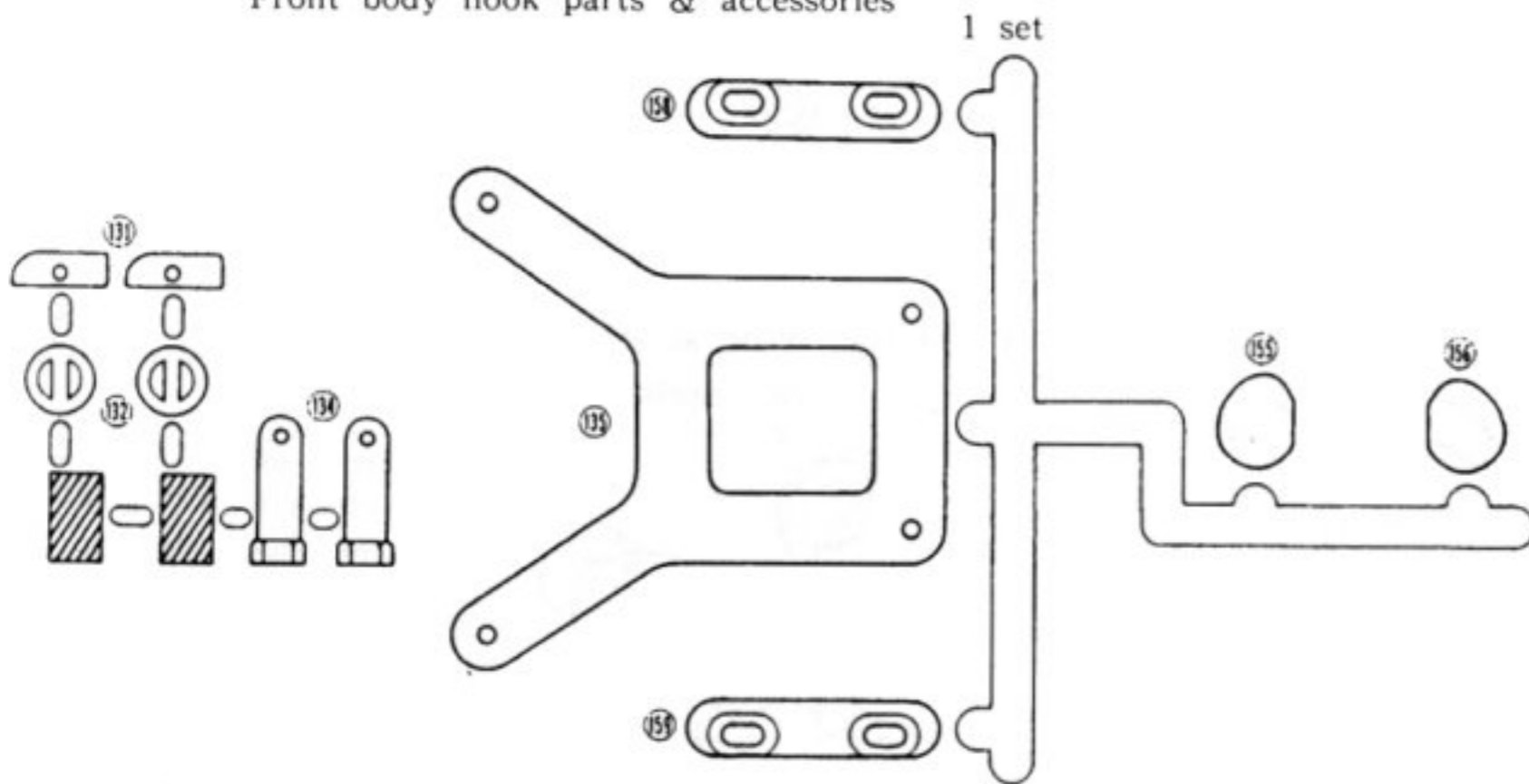
## LIST OF BAGGED PARTS (2)

Bag No.	Key #	Part Name	Qty	Step
FRS-3 Screw Nut Others	108	E Ring (E-2,5)	5	4 8
	160	Hook Pin	2	23
	143	Hex Key (1,5mm)	1	18 19
	144	Hex Key (2mm)	1	4 9
		Round Head Screw M3x12	5	
		Round Head Screw M3x20	2	
		Round Head Screw M3x30	1	
		Round Head Screw M4x55	1	
		TP Bind Screw M3x10	20	
		TP Round Head Screw M3x18	2	
		M2,6 Nut	2	
		M3 Nut	11	
		M4 Nut	1	
		M3 Nylon Nut	3	
		M4 Nylon Nut	4	
		M4x8 Set Screw	4	
		M4x4 Set Screw	4	
		M3x3 Set Screw	3	
		M5 Washer	6	



These shaded parts are not used.

Front body hook parts & accessories

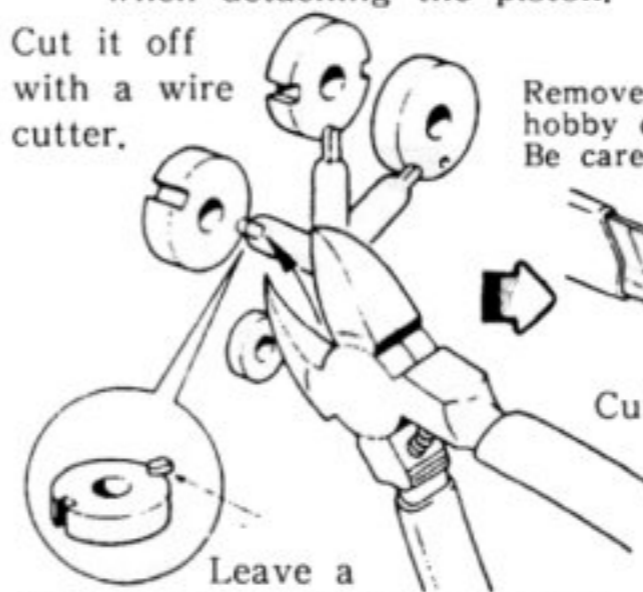


## LAYOUT DRAWING OF PLASTIC PARTS ON RUNNERS

<When Cutting off parts from a runner...>

\*Pay particular attention when detaching the piston.

Cut it off with a wire cutter.



The part is marred by cutting excessively.

Remove the stubble with a hobby cutter. Be careful not to cut your finger.

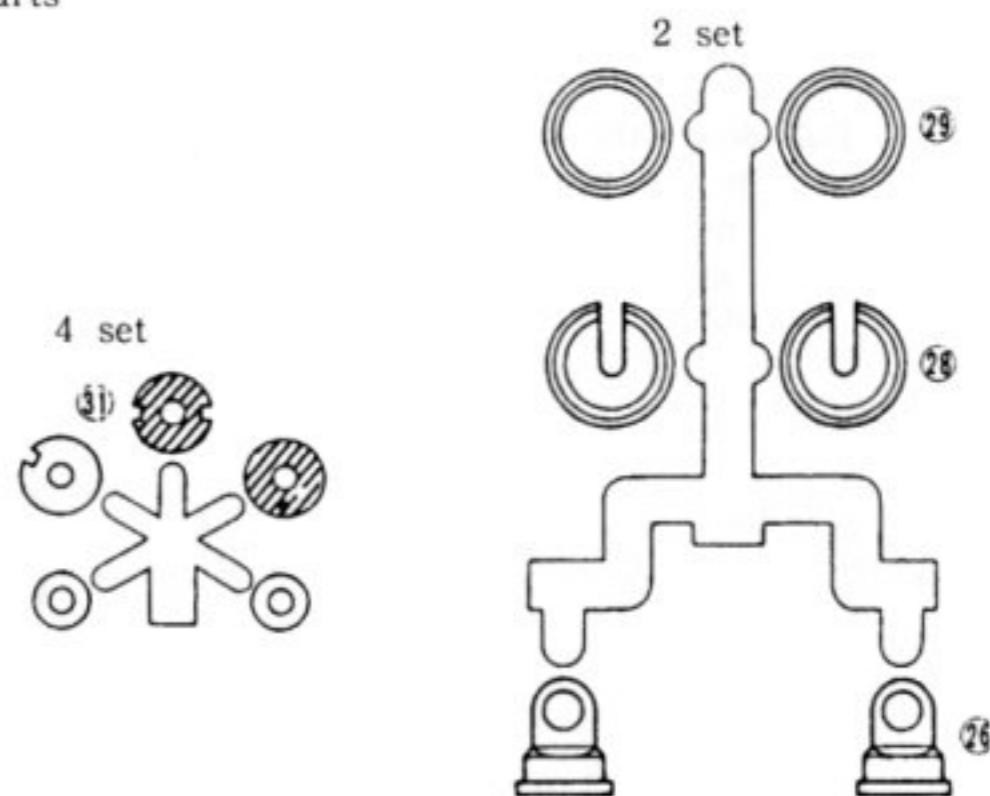
The root till remains.

Cut both sides.

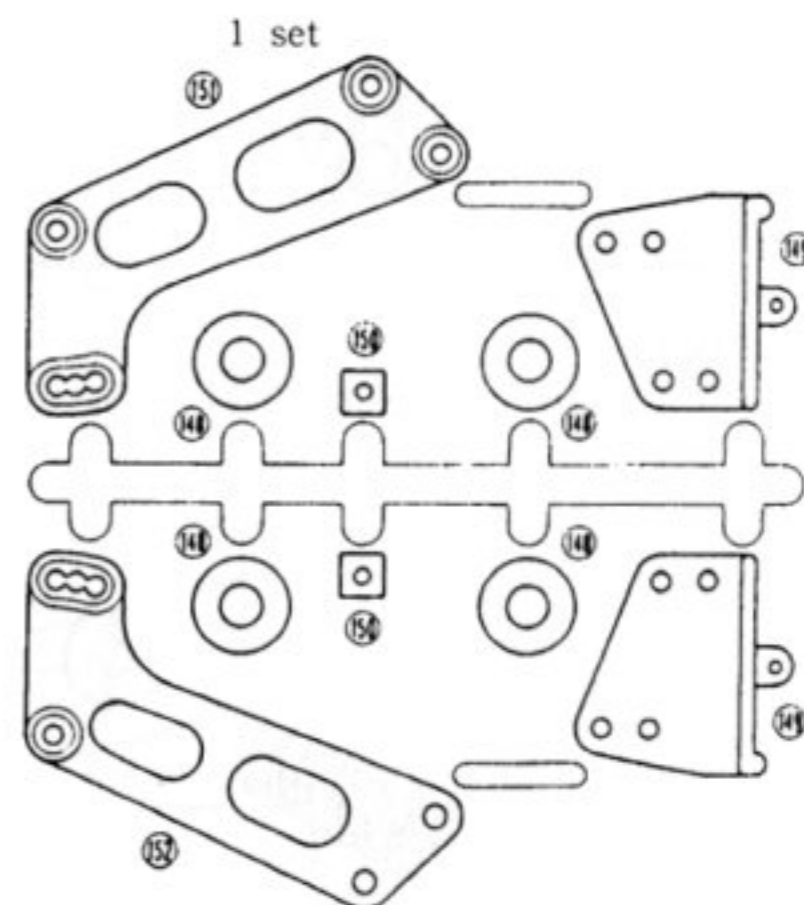
This is how it should be done.

Good

Shock Parts



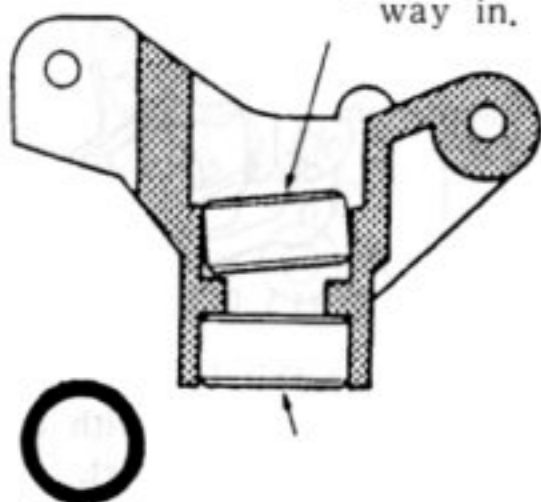
Upright Parts



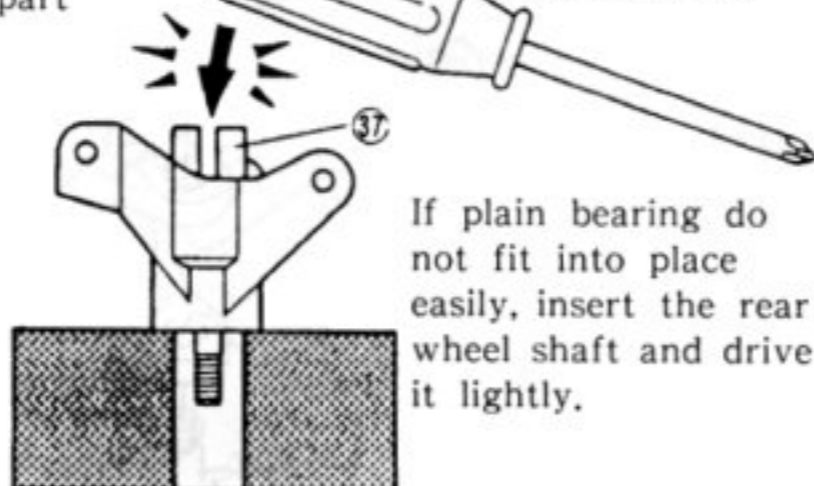
## WHEN MOUNTING PLAIN BEARING...

(1) Press it in fully.

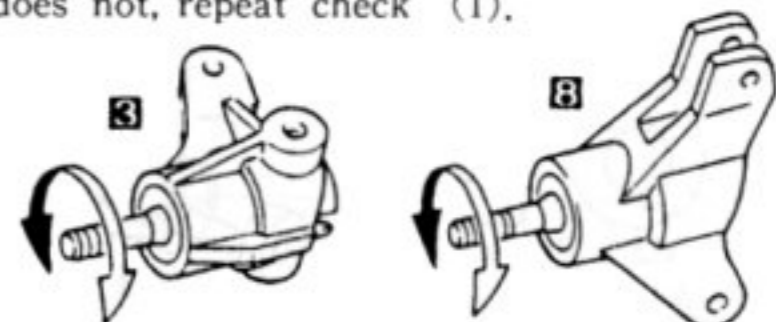
Be careful not to get it coched part way in.



Tap with something soft like a handle of a screwdriver.



(2) After fitting the plain bearings, put the shaft through and turn it to check that it revolves smoothly. If it does not, repeat check (1).



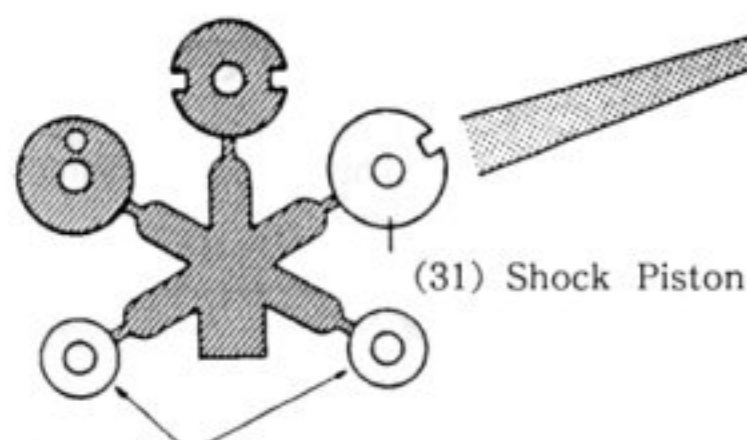
(3) Apply grease to the shaft when assembling them..

**1 ASSEMBLY OF SHOCK**

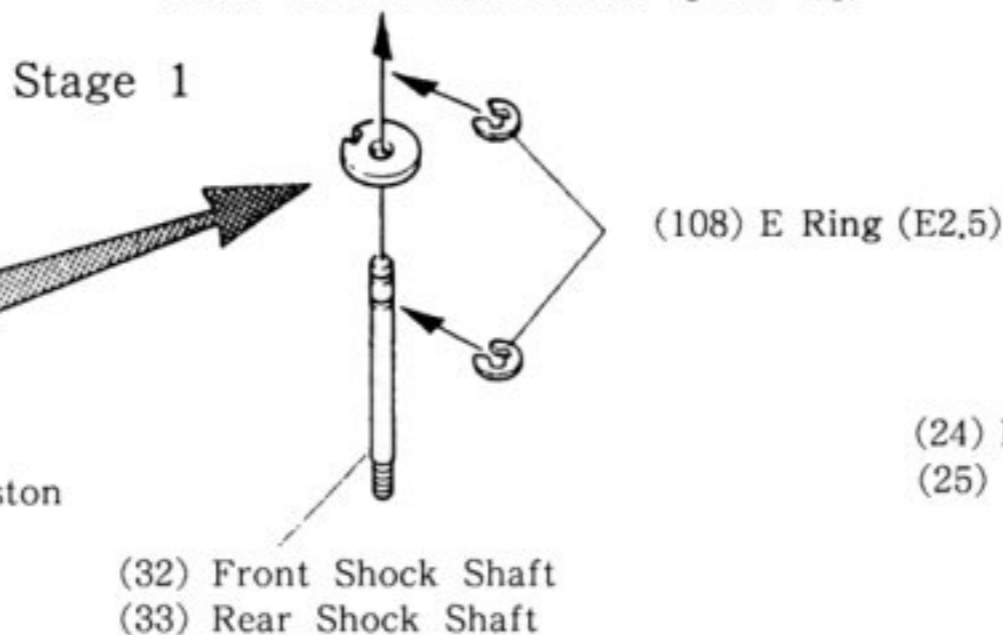
The parts for the front shocks are in bag [FRS-1], Those for the rear are in [FRS-2].

\*The shaded parts will not be used.

Stage 1



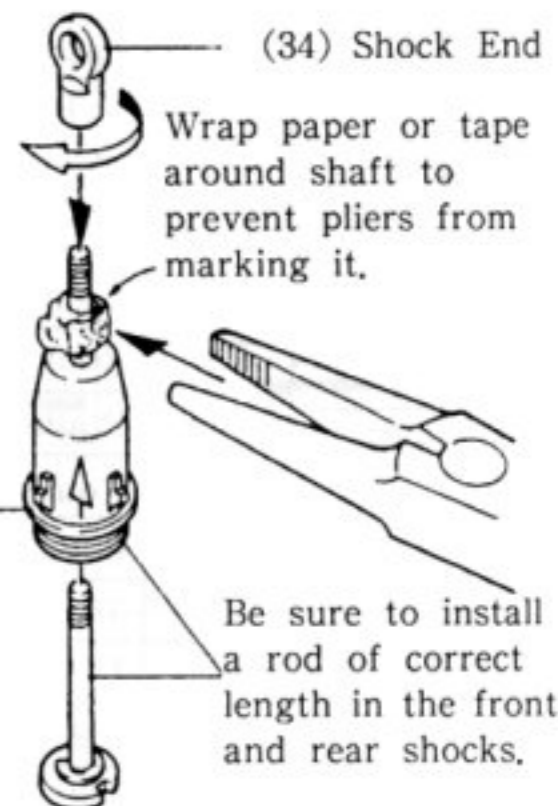
Use 1 pcs, in step 6  
2 pcs, in step 11  
4 pcs, in step 14



Assemble 2 each for front and rear.

Stage 2

(24) Front Shock Case  
(25) Rear Shock Case



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

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

**2 FULL THE OIL SHOCK**

● The parts for the front shocks are in bag [FSR-1], those for the rear are in [FSR-2].

Stage 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.

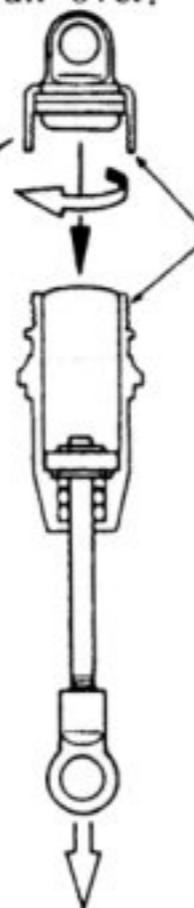
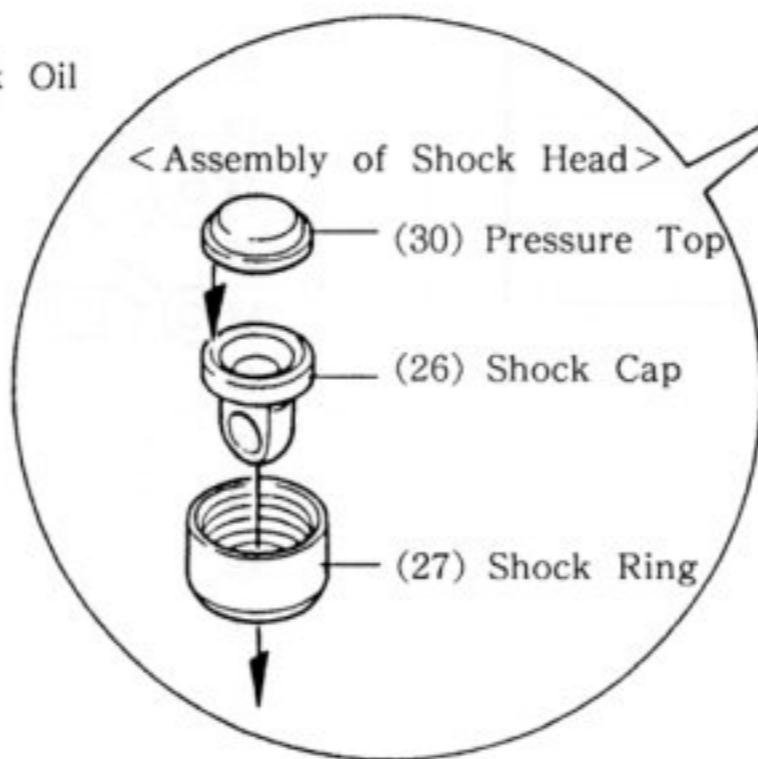
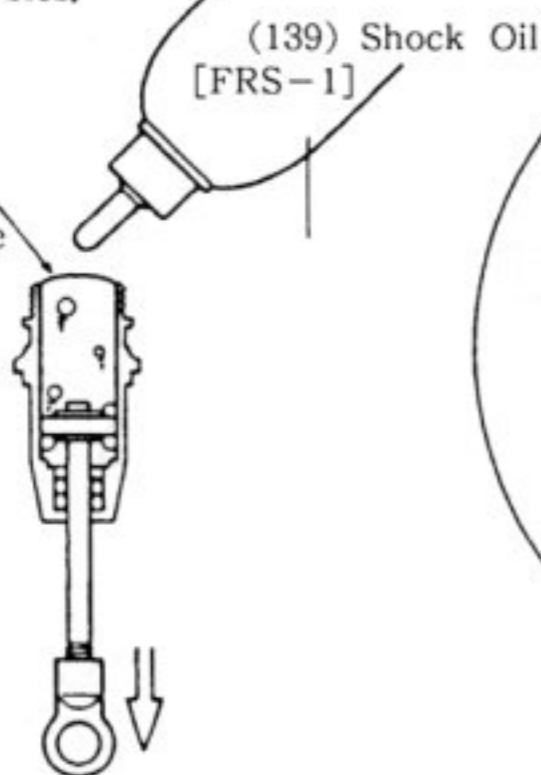
Stage 2

Keep the piston in the lowest position and tight 26 gradually, then excessive oil run over.

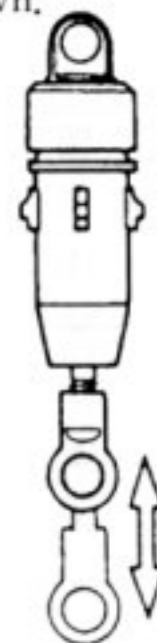
Stage 3

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

Fill the cylinder to slightly above brim.



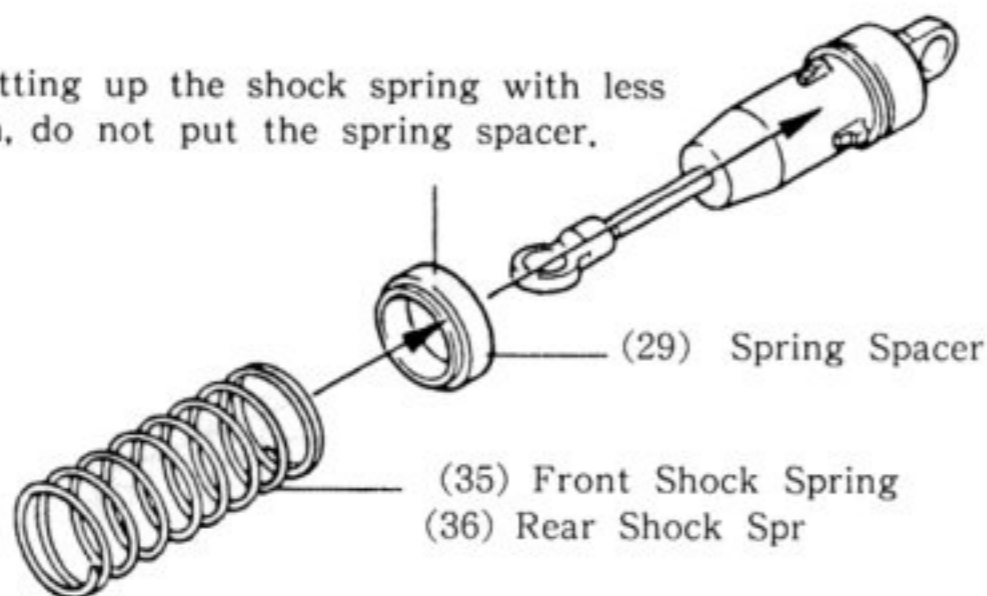
In the end, tighten it firmly so that the oil will not leak out.



It should move without any binding.

Stage 4

For setting up the shock spring with less tension, do not put the spring spacer.

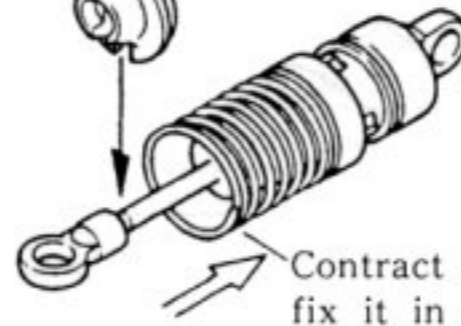


Mount the spring as shown.

(28) Spring Holder

Attach the rest of parts, then the shock will be completed.

The front shocks will be installed in step 7, and the rear shocks in step 11.



Contract the spring and fix it in position.

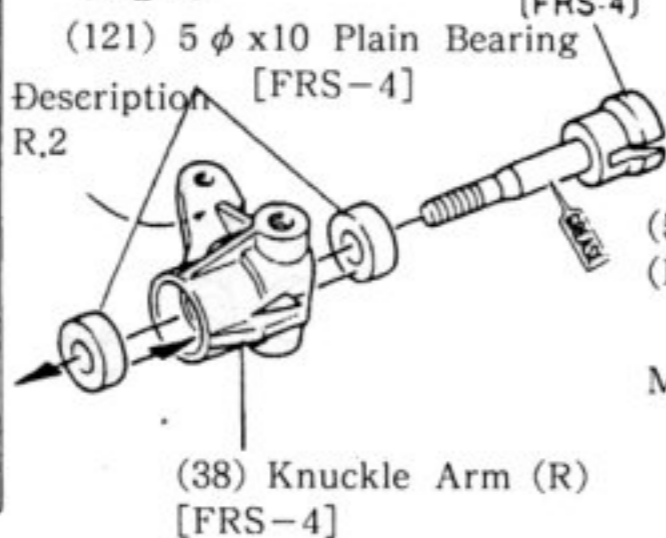
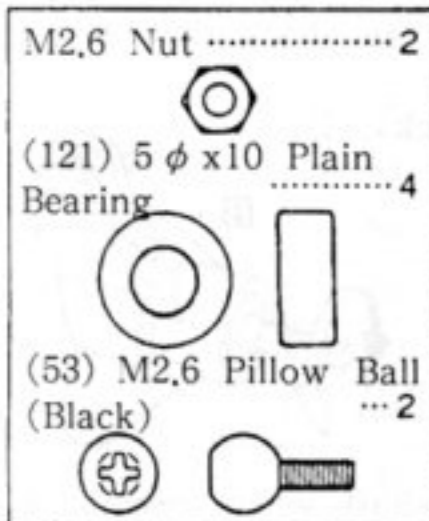
**3 ASSEMBLY OF KNUCKLE ARM**

Watch the marks "R" and "L", and the orientation.

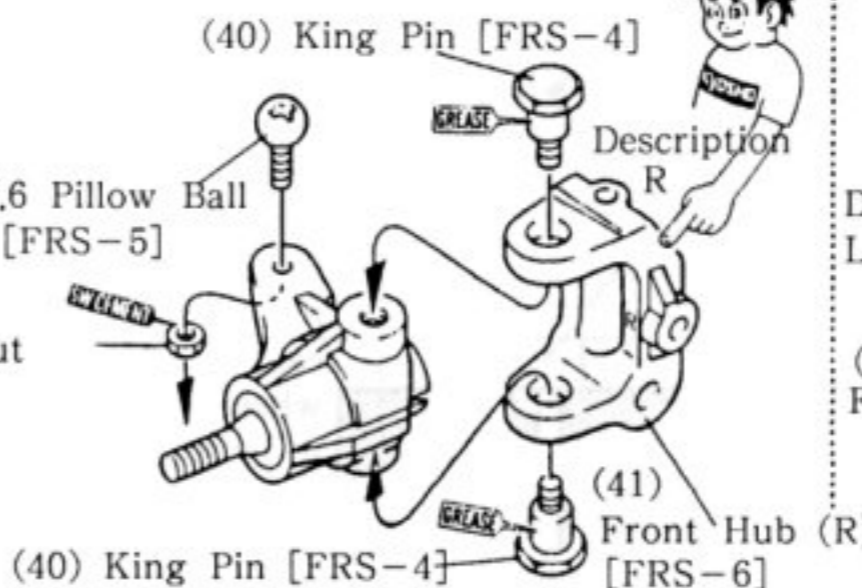
Stage 1

«Right»

Front Wheel Shaft [FRS-4]

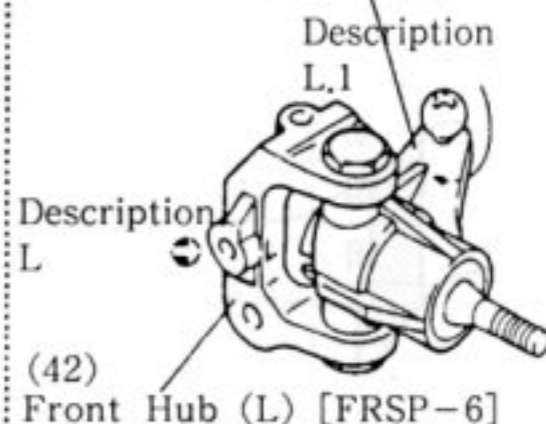


Stage 2



Stage 3 «Left»

(39) Knuckle Arm (L) [FRS-4]

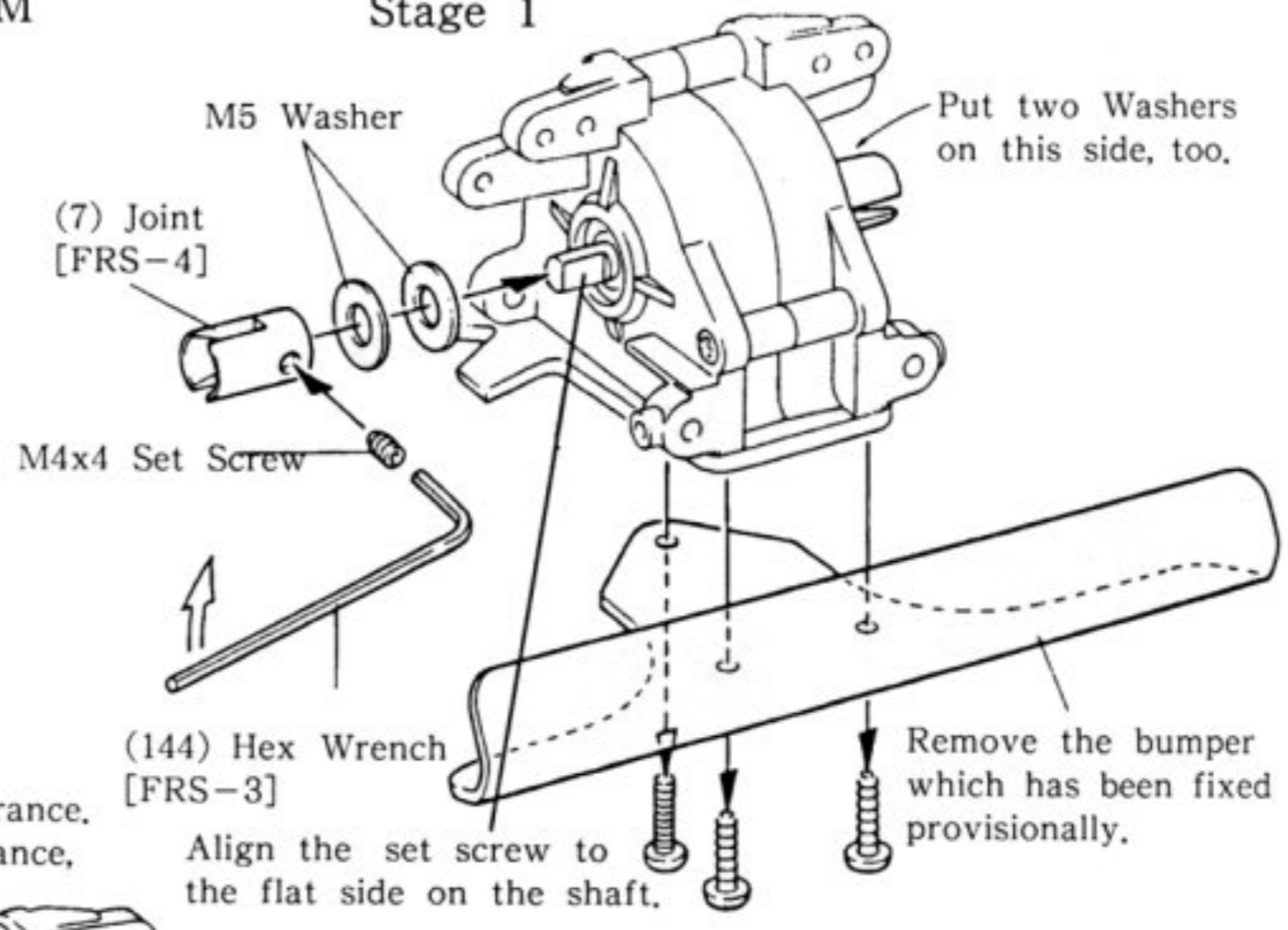


Assemble this in the same way as was done with the right side counterpart.

# 4 INSTALLATION OF FRONT SUSPENSION ARM

- M4x4 Set Screw ...2
- M4x8 Set Screw ...2
- M5 Washer ...4
- (47) Sus,Shaft (C)...2

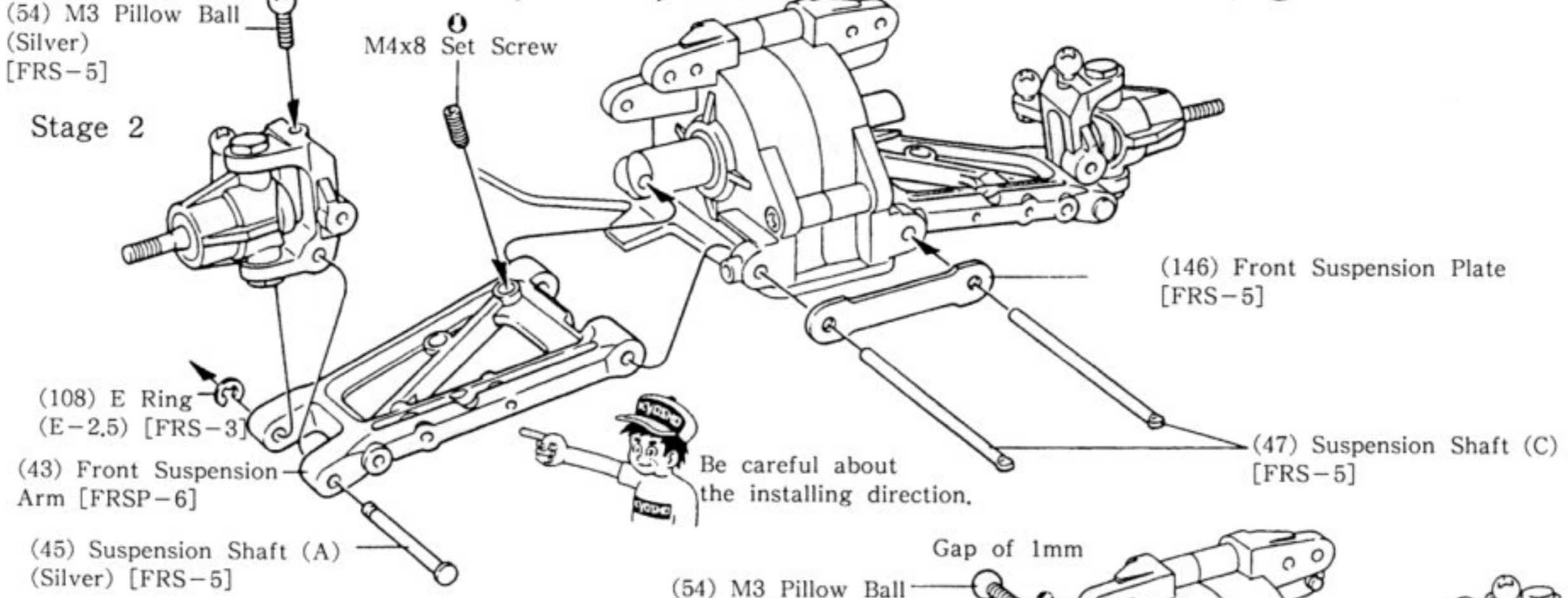
## Stage 1



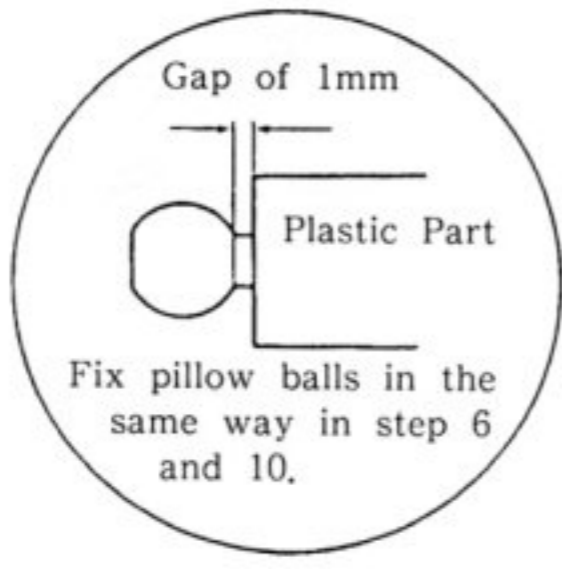
This is the screw to adjust the car clearance. By screwing in, you will have less clearance, and the other way more body clearanc

- (54) M3 Pillow Ball (Silver) [FRS-5]

## Stage 2

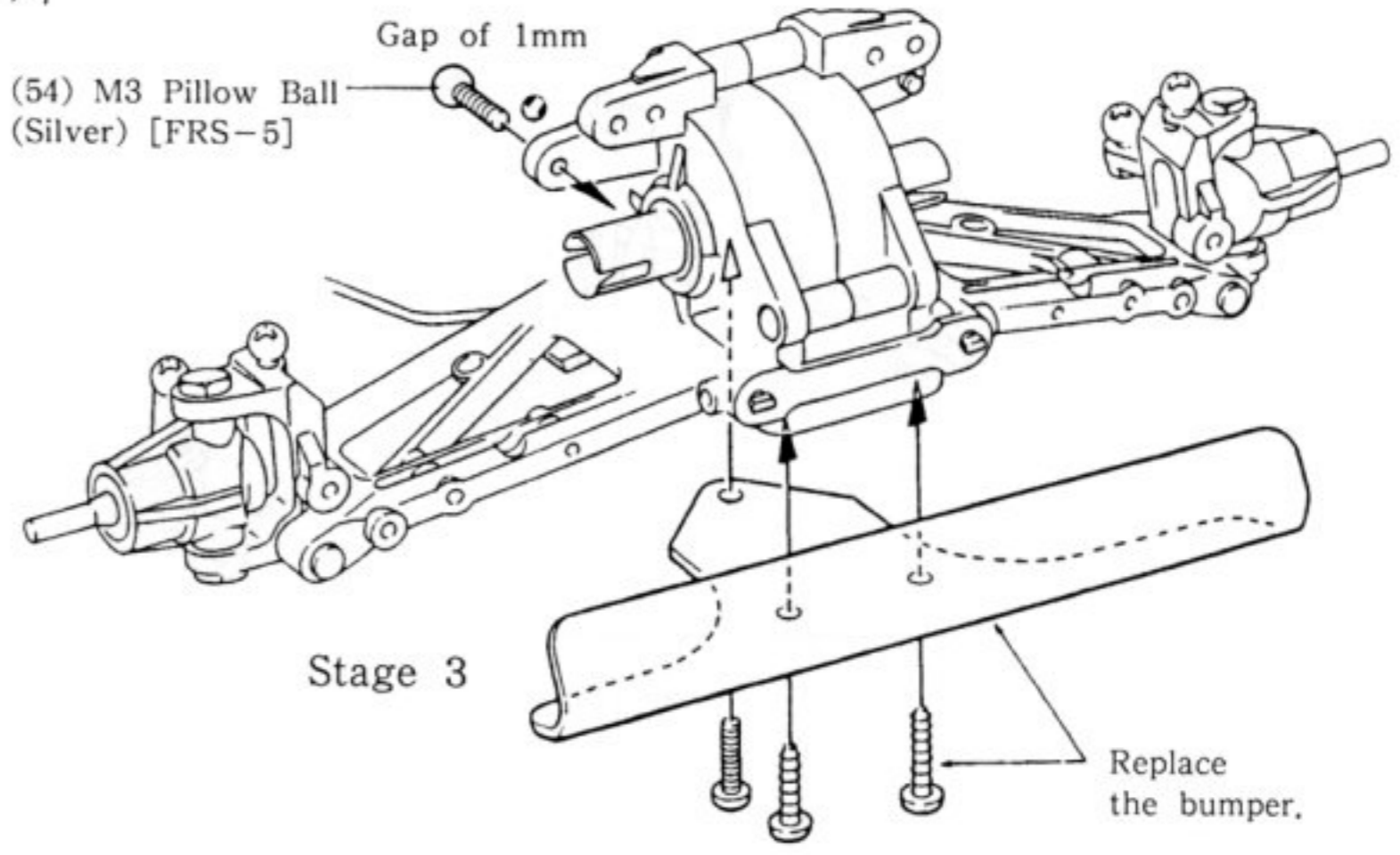


When fixing a M3 pillow ball into a plastic part.



- (45) Sus, Shaft (A) (Silver)...2
- (54) M3 Pillow Ball (Silver)...4
- (108) E Ring (E-2.5)

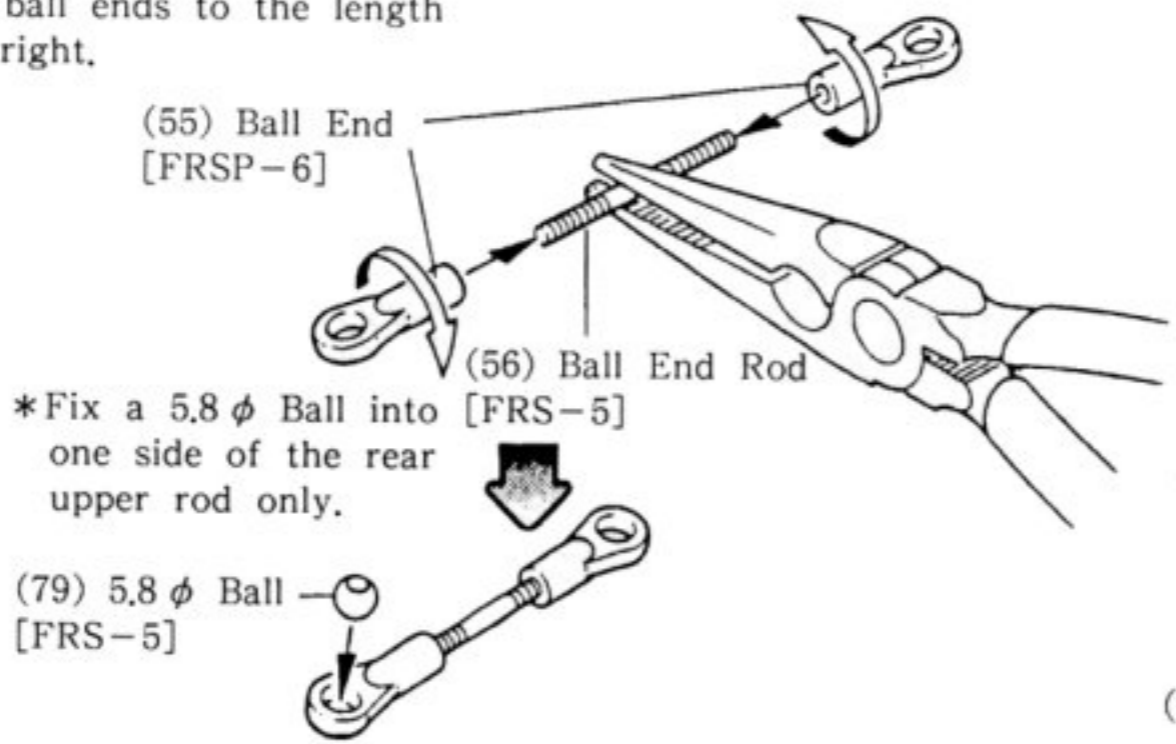
## Stage 3



# 5 ASSEMBLY OF UPPER ROD AND TIE ROD

\*Screw in the ball ends to the length as shown at right.

- (55) Ball End ...12
- (79) 5.8 φ Ball ...2

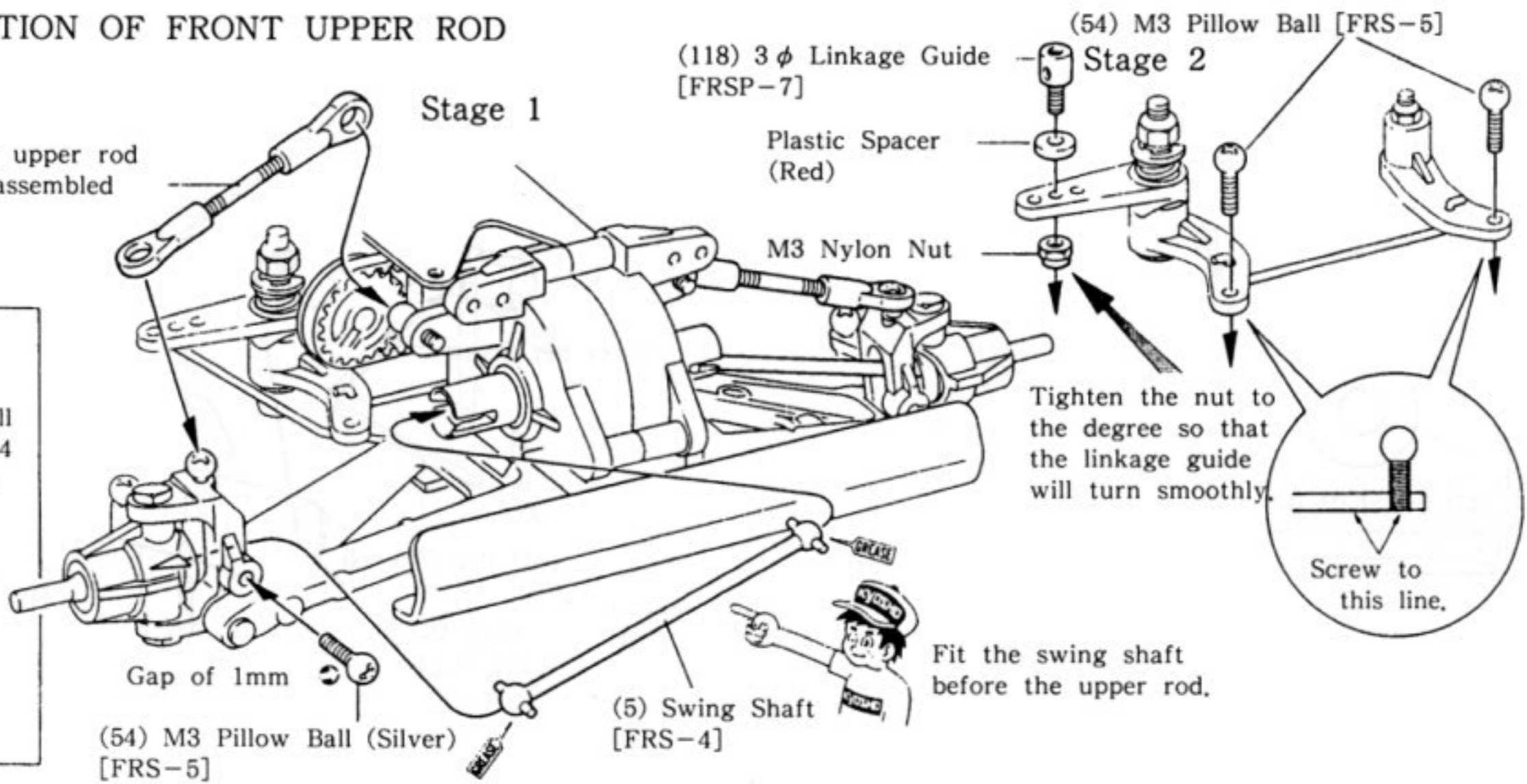
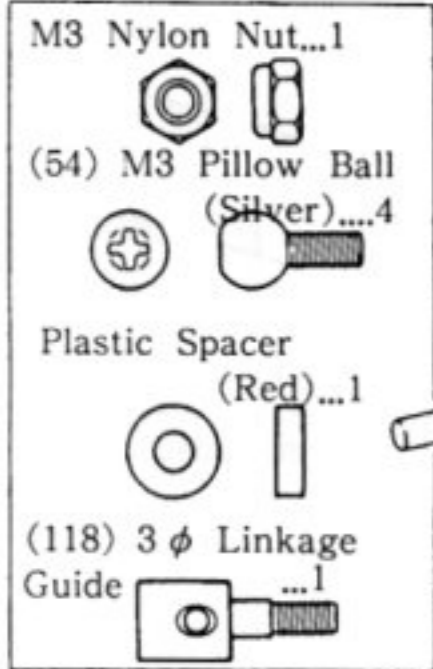


[Actual Size]

- Front Upper Rod...2 pcs. Use in step 6. (18mm)
- Tie Rod ...2 pcs. Use in step 7. (14mm)
- Rear Upper Rod ...2 pcs. Use in step 10. (21mm)

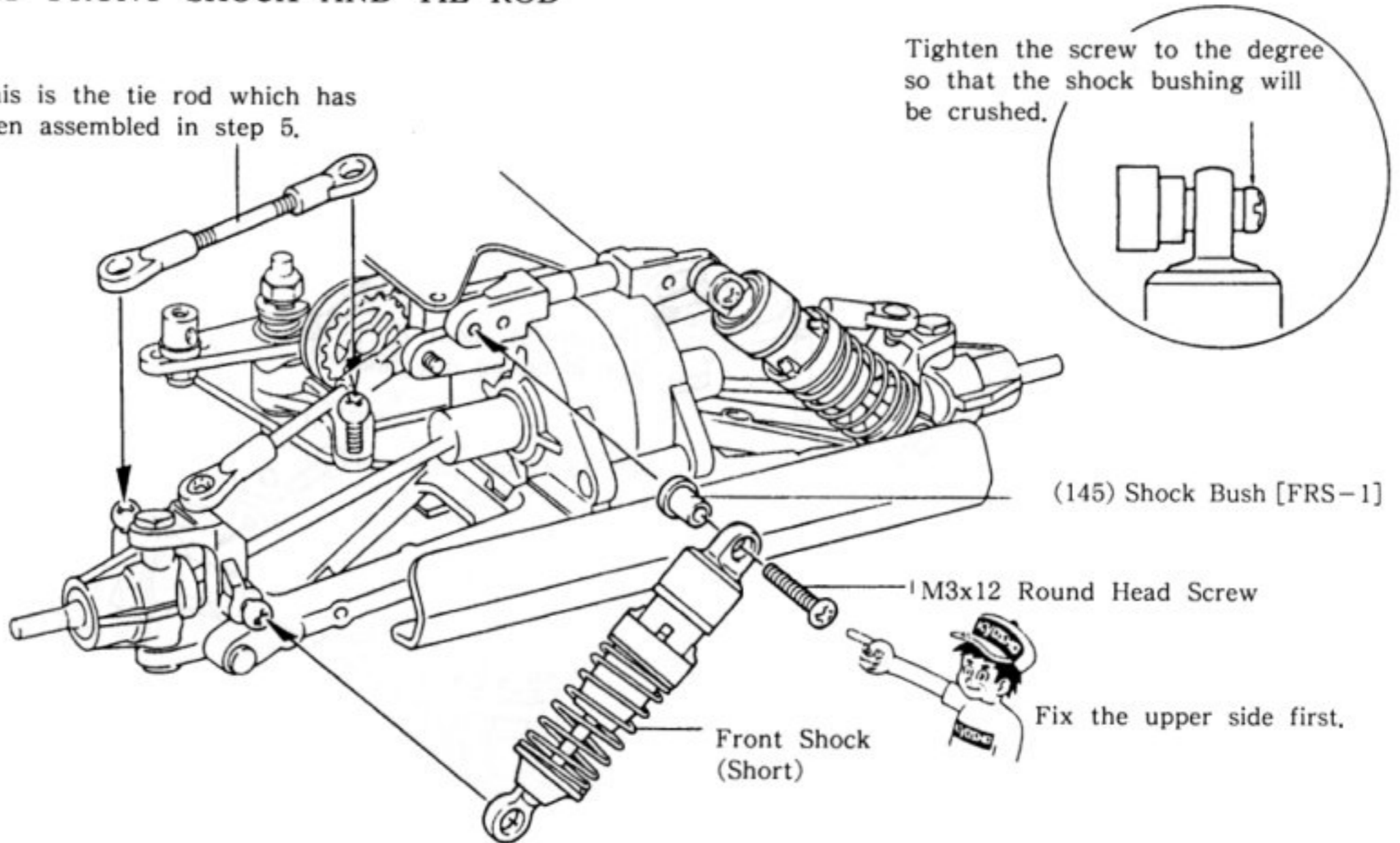
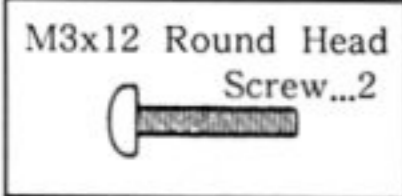
## 6 INSTALLATION OF FRONT UPPER ROD

This is the front upper rod which has been assembled in step 5.

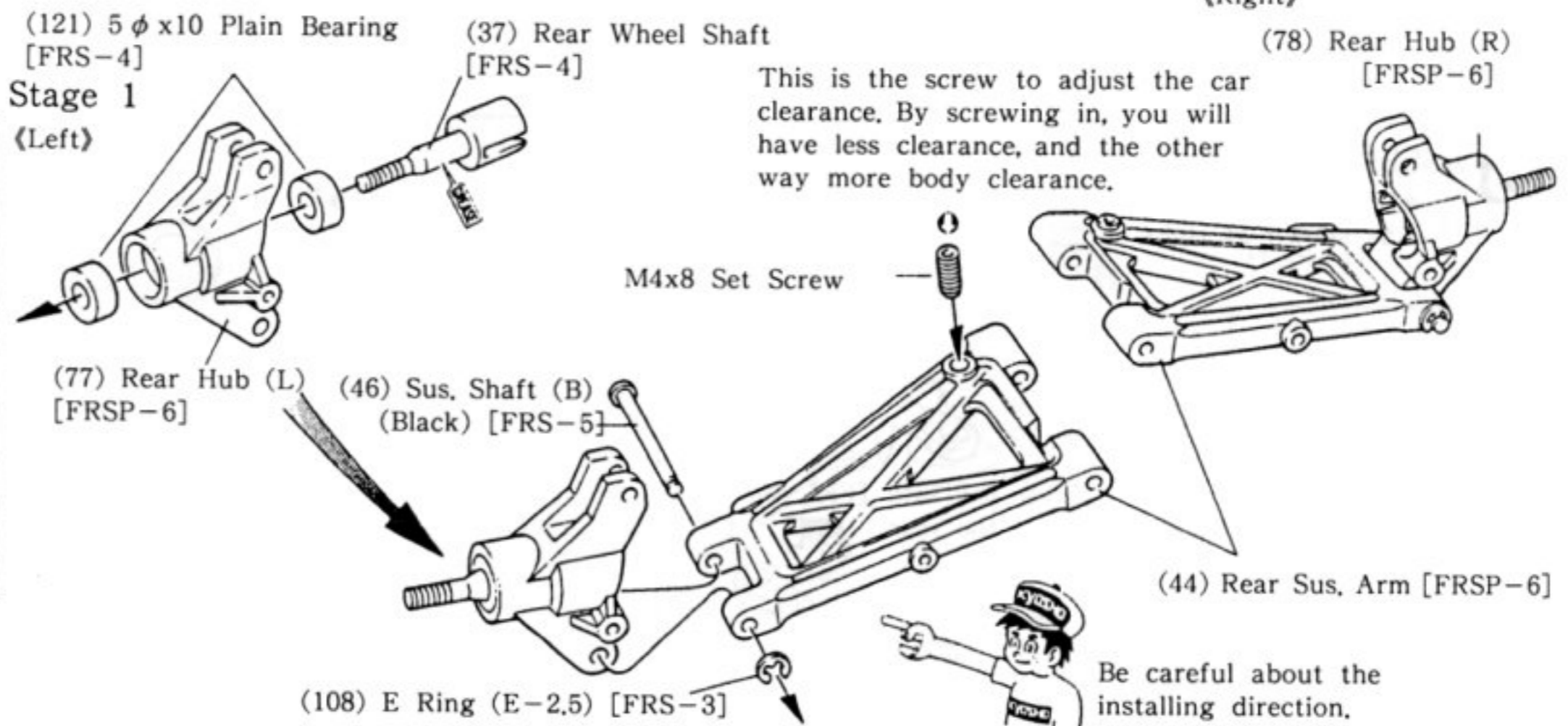
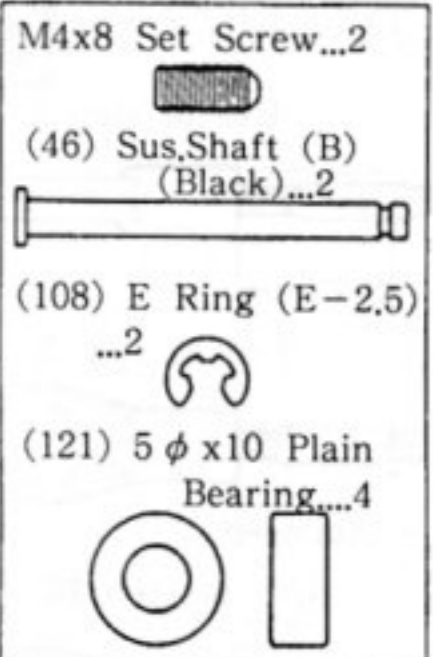


## 7 INSTALLATION OF FRONT SHOCK AND TIE ROD

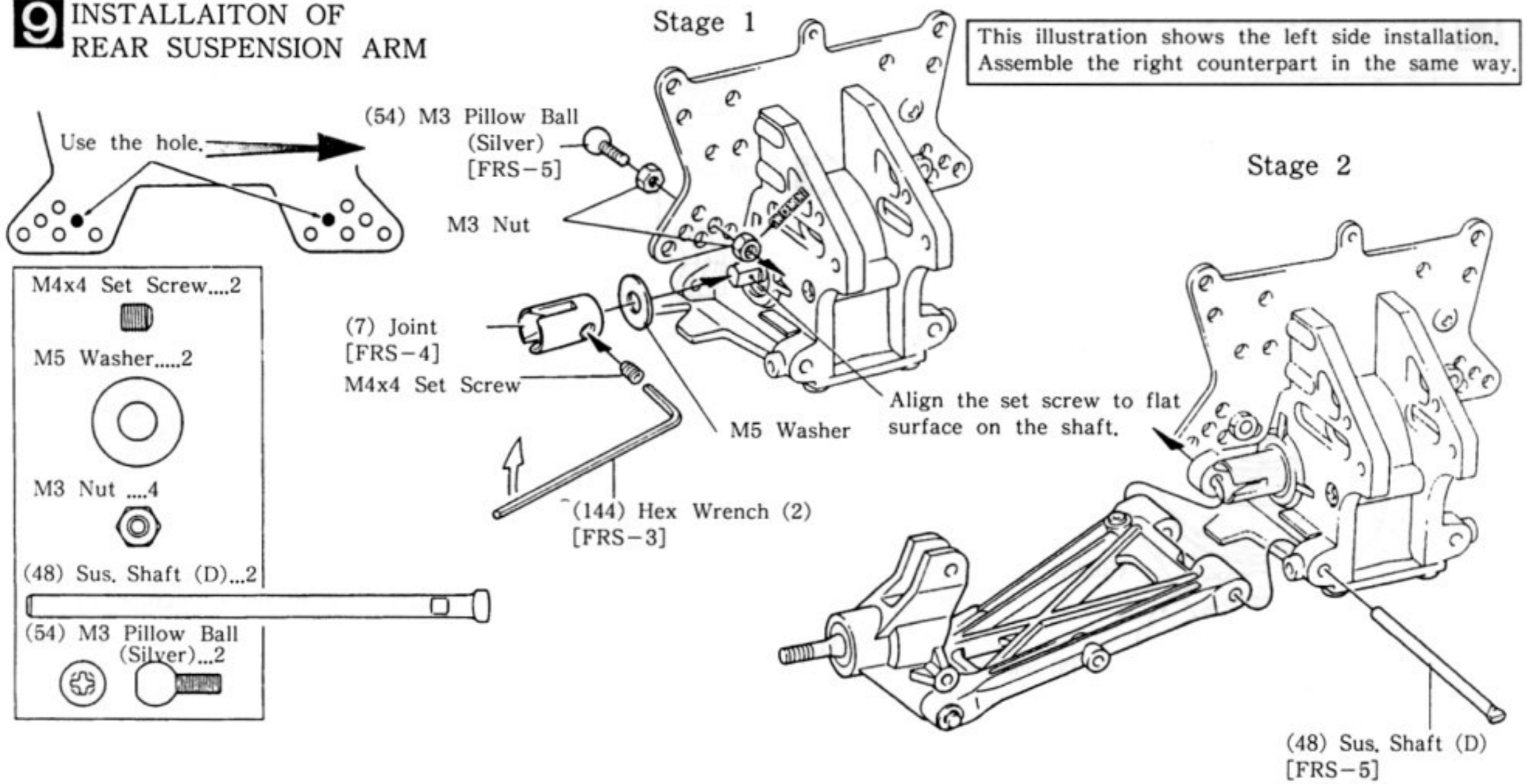
This is the tie rod which has been assembled in step 5.



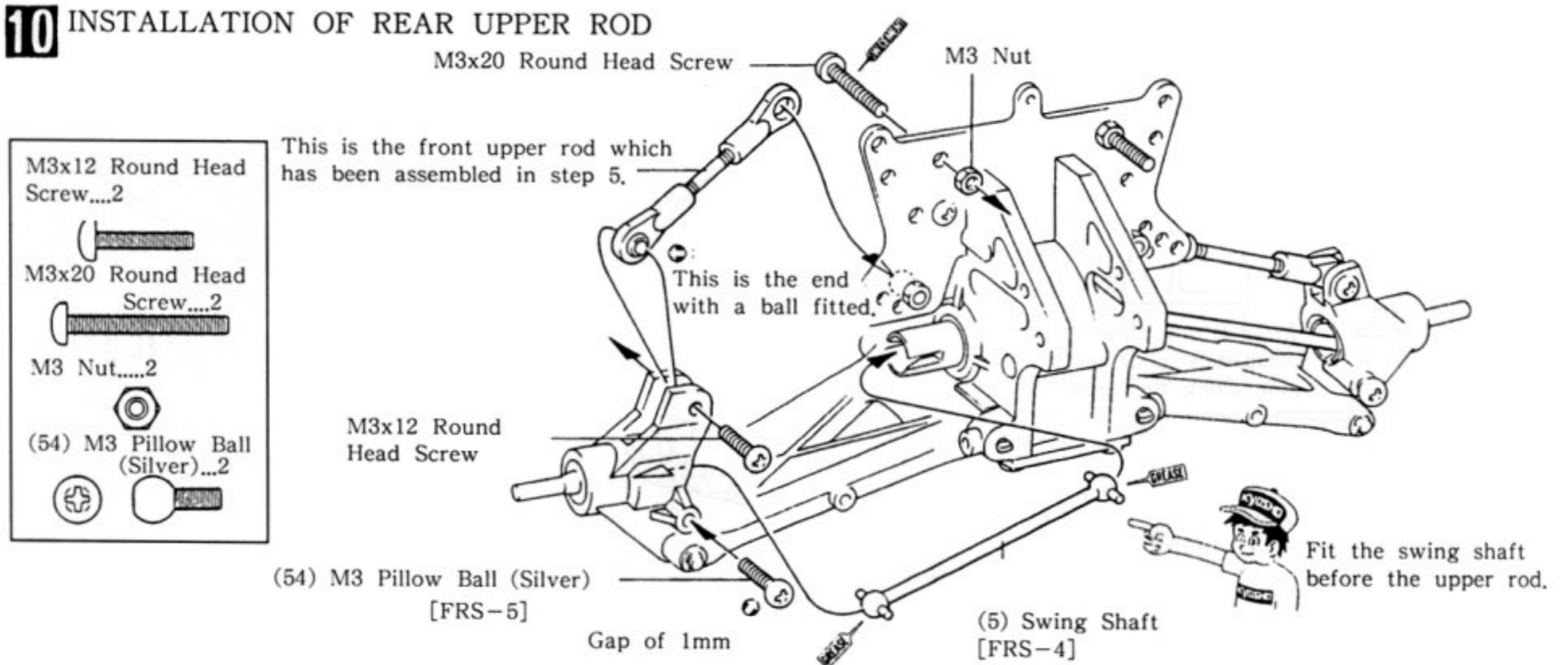
## 8 INSTALLATION OF REAR HUB



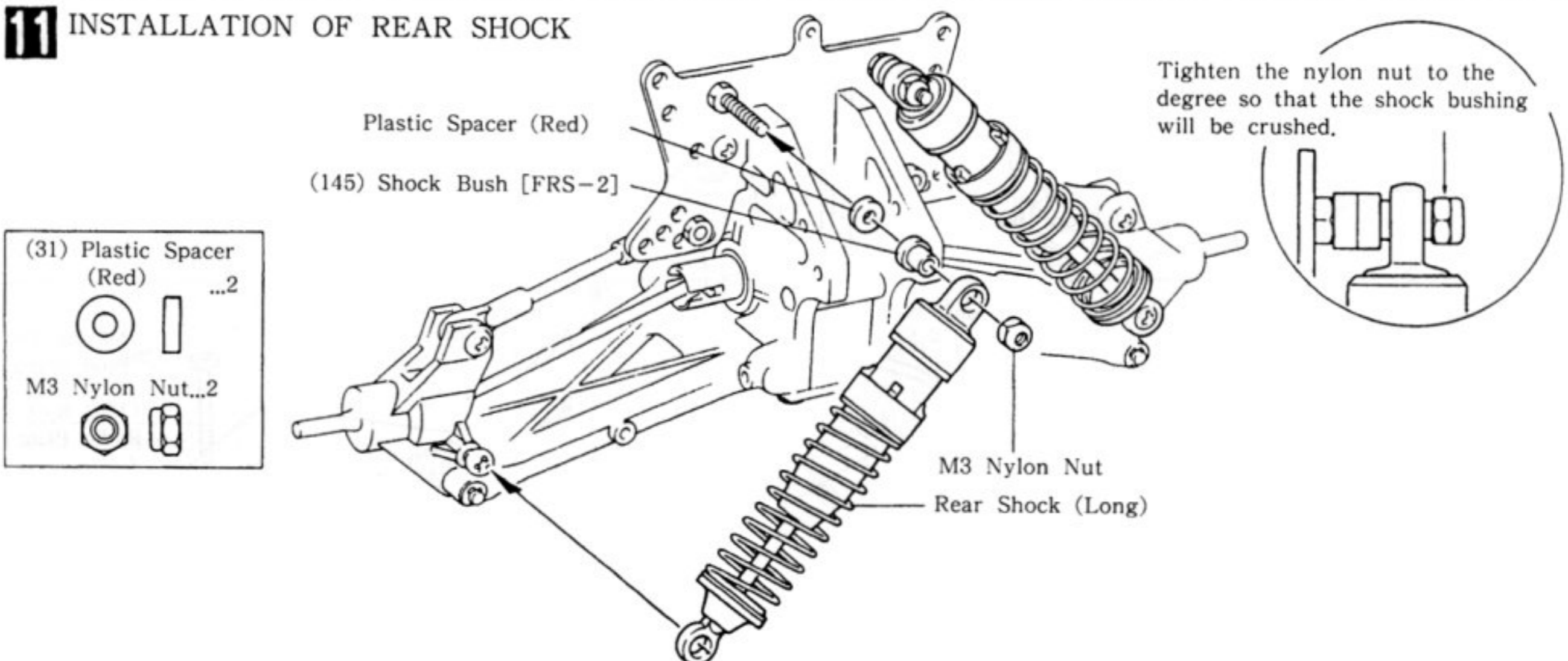
## 9 INSTALLATION OF REAR SUSPENSION ARM



## 10 INSTALLATION OF REAR UPPER ROD



## 11 INSTALLATION OF REAR SHOCK



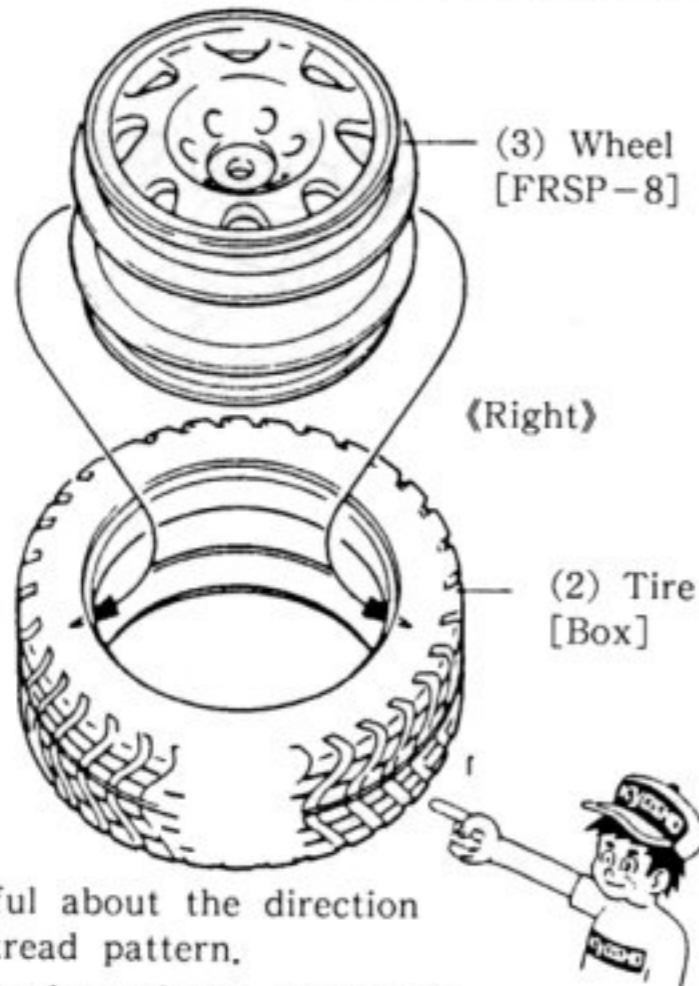
## 12 INSTALLATION OF TIRE

M4 Nylon Nut ...4



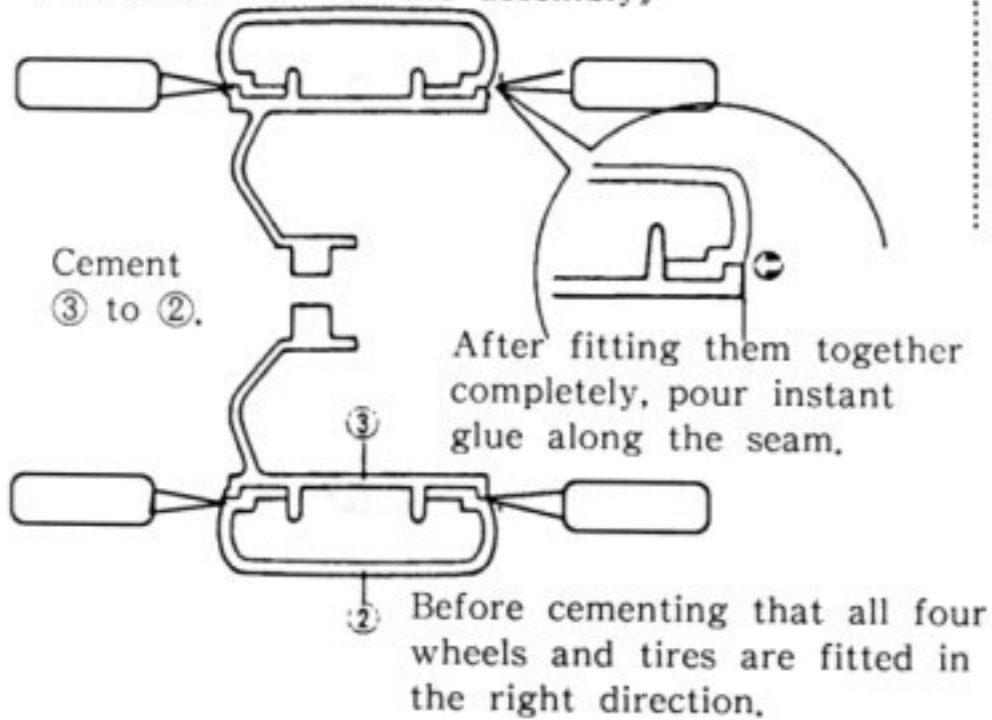
### Stage 1 <Fixing of wheel and tire>

This illustration shows the right side wheel. In the case of the left side, everything is the same but the direction of the tread pattern is opposite.

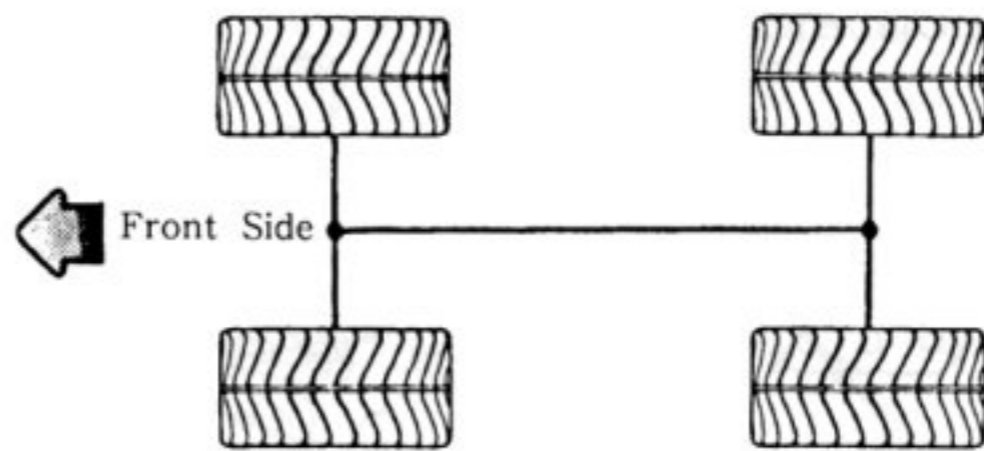


Be careful about the direction of the tread pattern.

《Sectional view of the assembly》

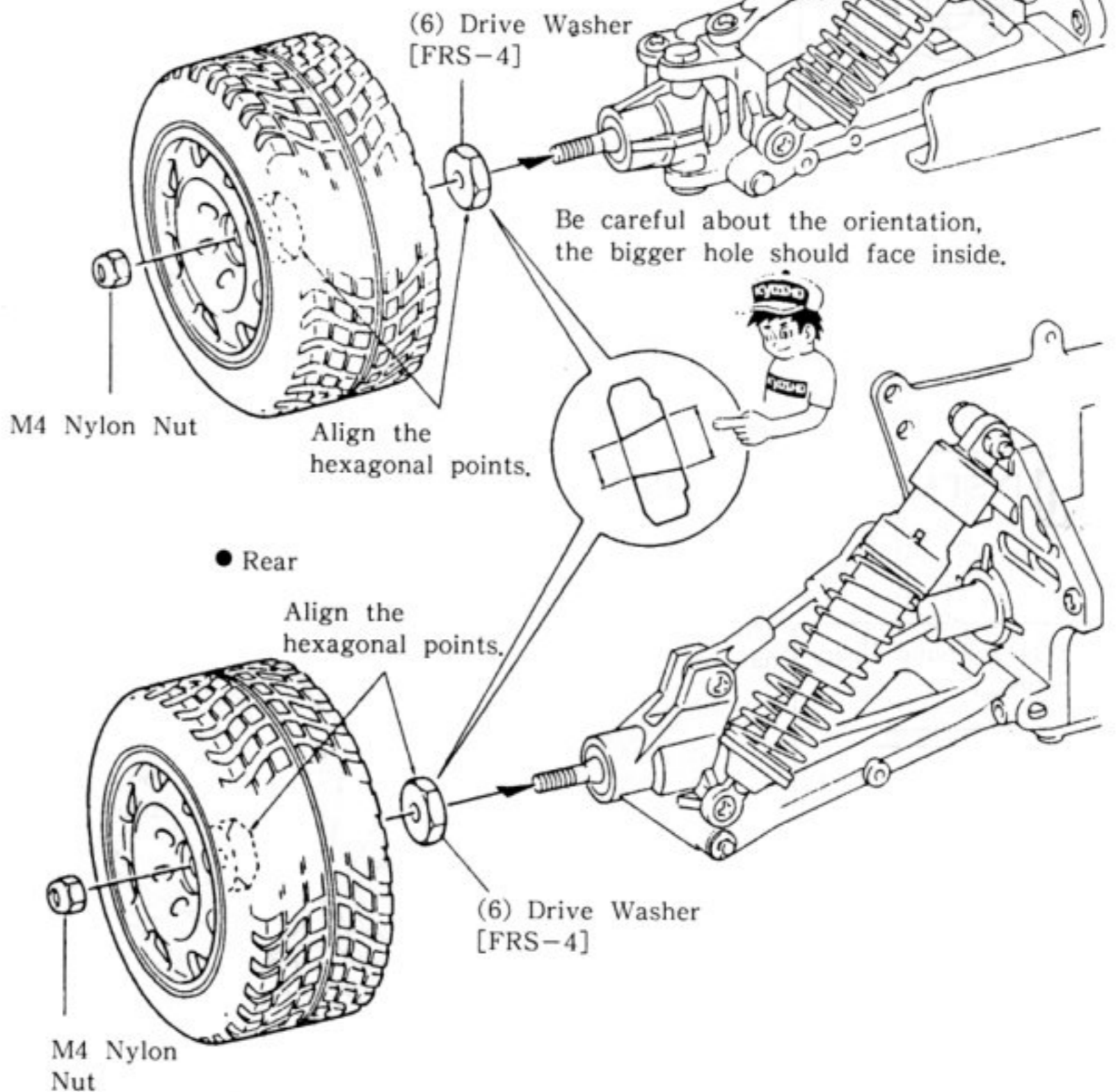


<Right direction of tire patterns>

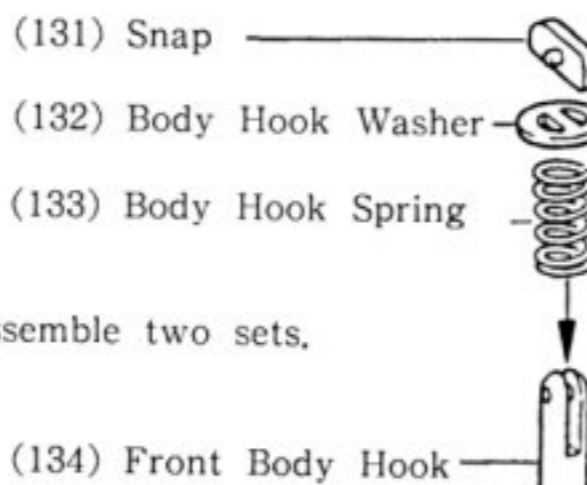
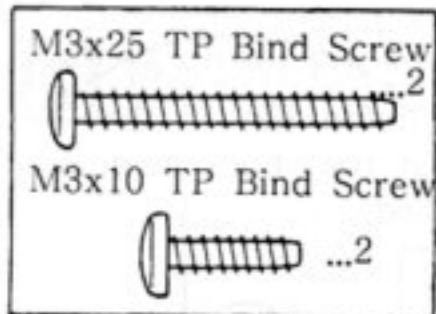


### Stage 2 <Installation of tire>

● Front

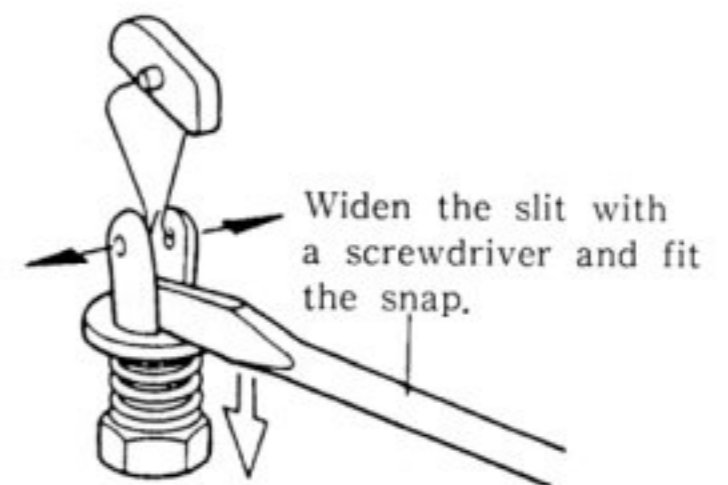


## 13 ASSEMBLY OF FRONT BODY MOUNT The parts for the front body mount are in bag [FRSP-9].

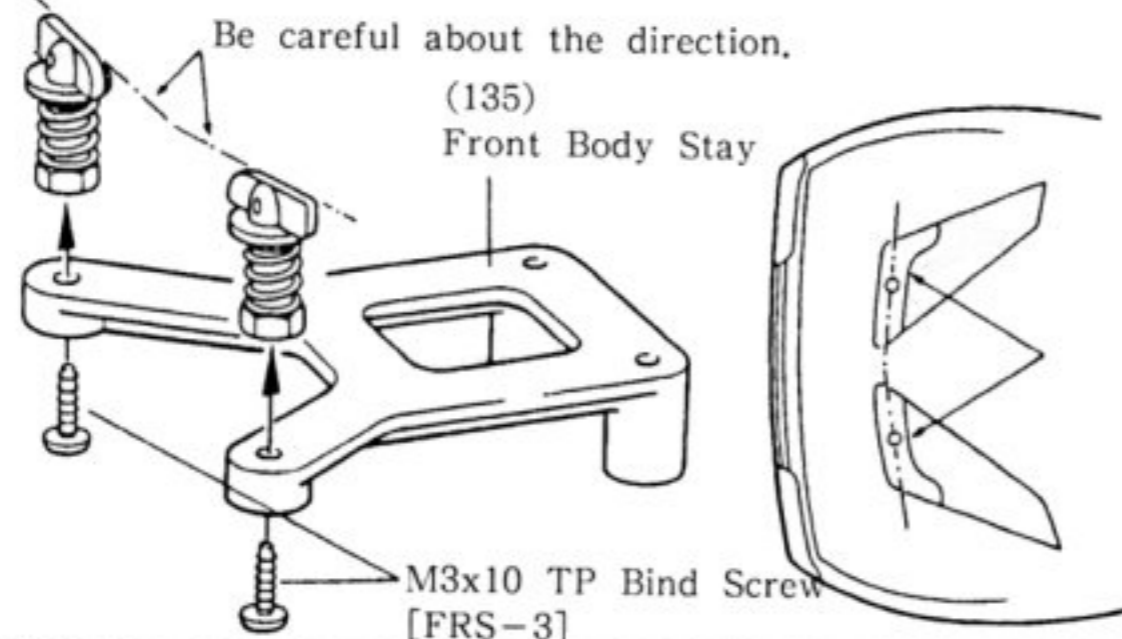


\* Assemble two sets.

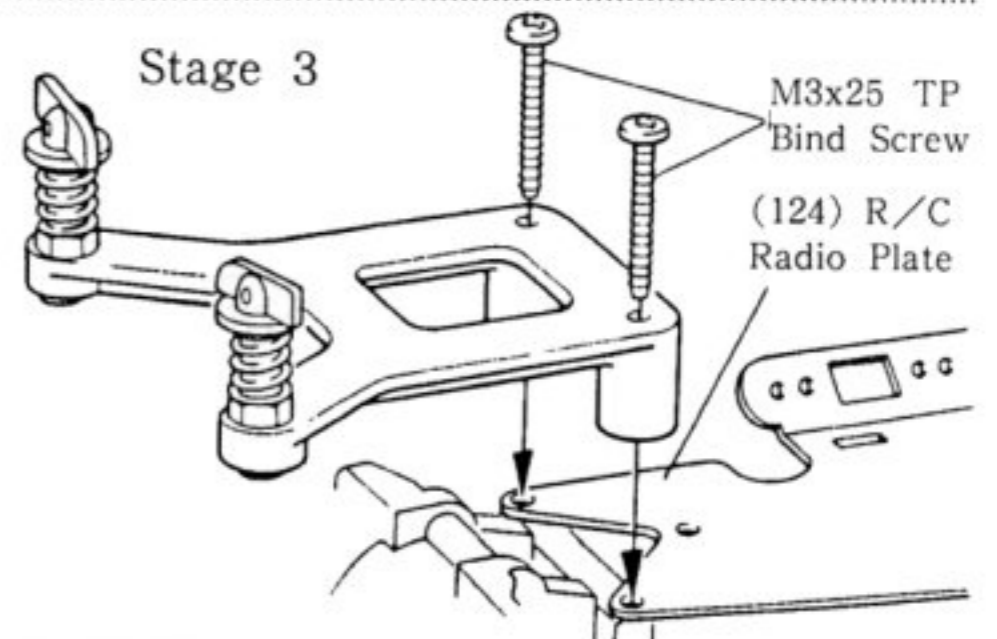
### Stage 1



### Stage 2



### Stage 3



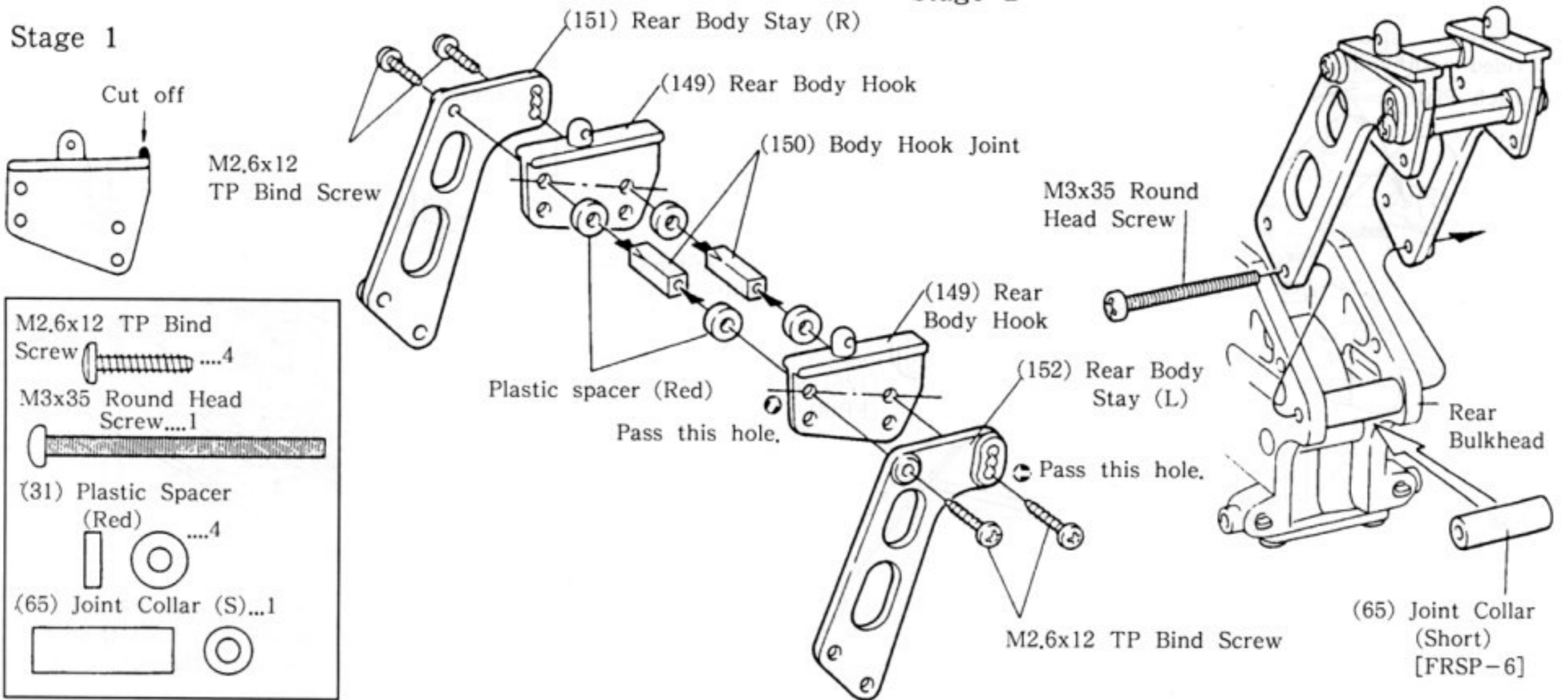
# 14 ASSEMBLY OF REAR BODY STAY

The part of body stay are in bag [FRSP-9].

Stage 3

Stage 2

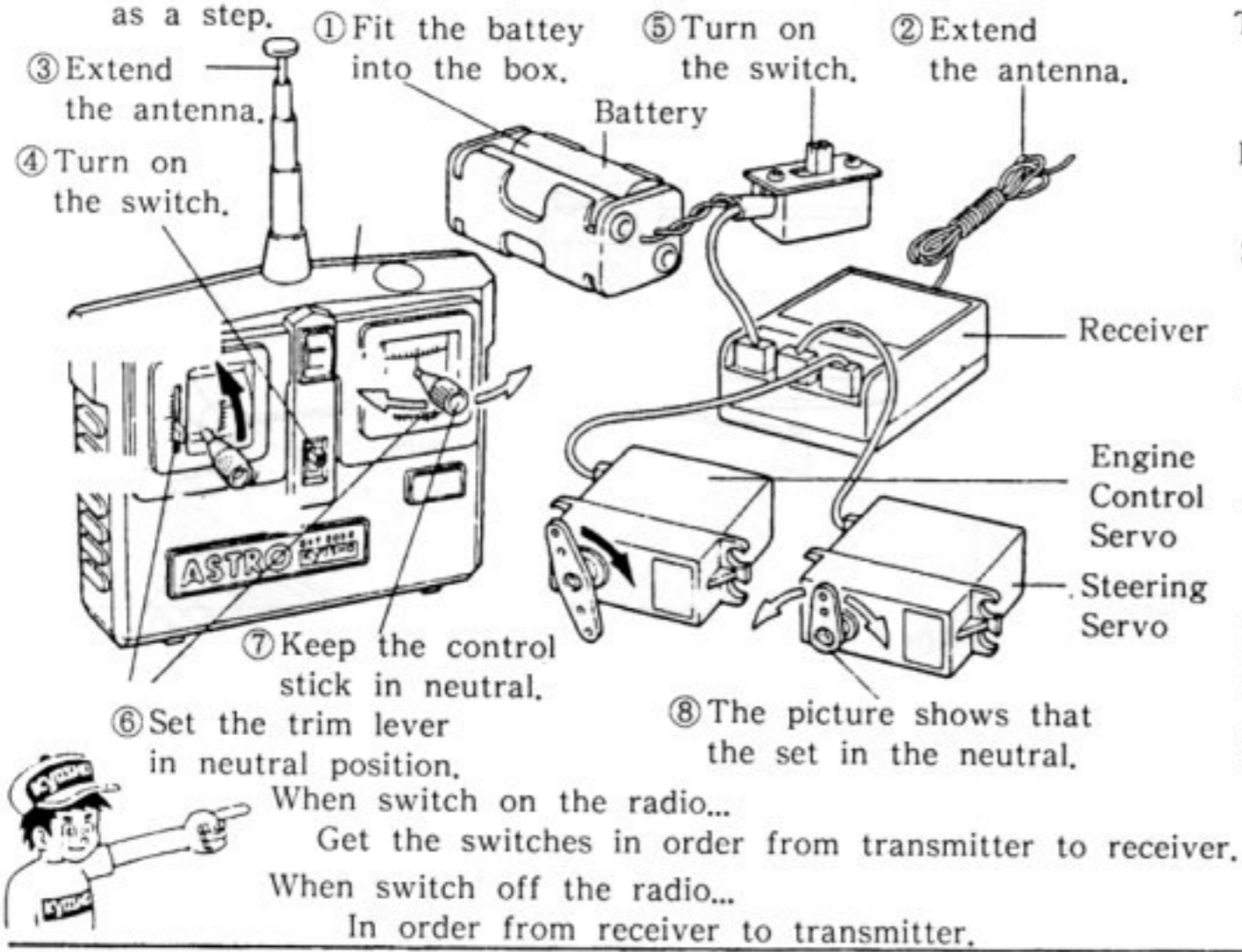
Stage 1



## ● INSTALLTION OF RADIO UNIT AND LINKAGE 15-19

### 15 HOW TO CHECK RADIO SYSTEM

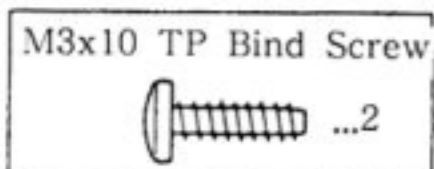
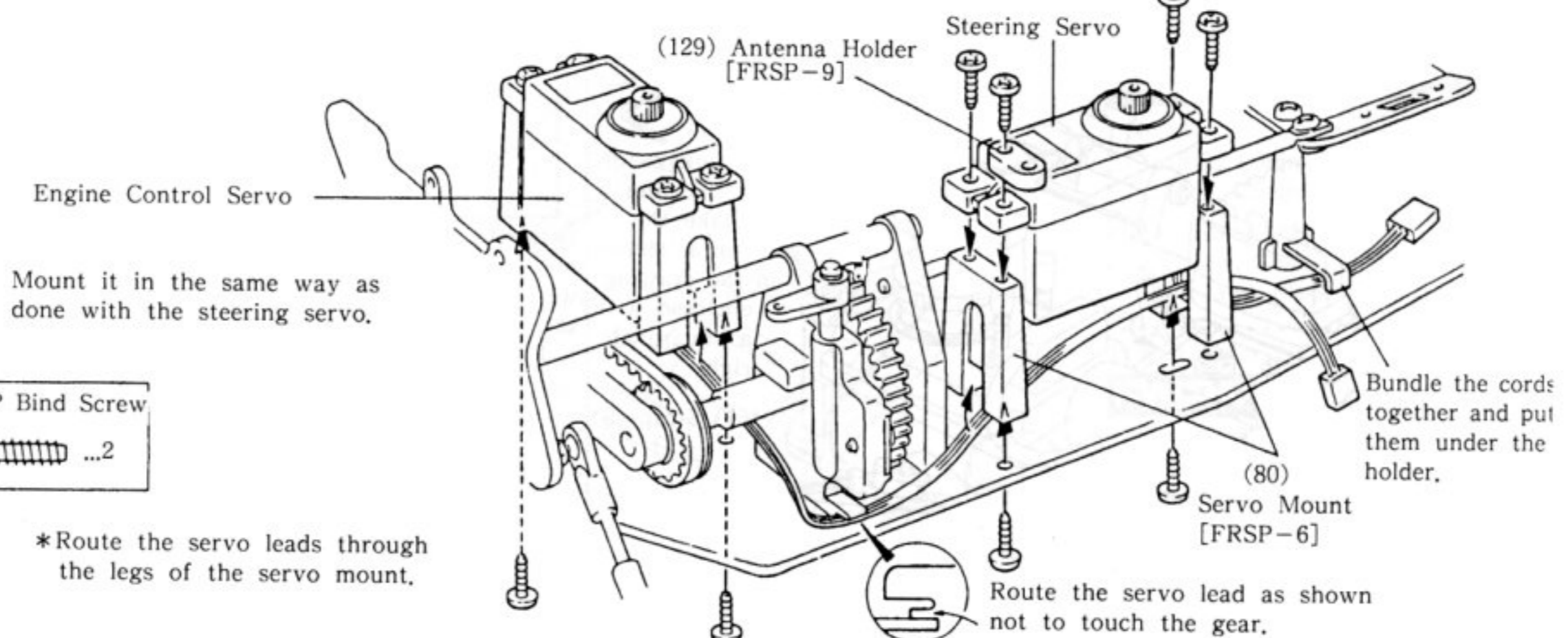
Let's test the system by following number one by one as a step.



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

- Transmitter...** It is control box which manipulates by stick movements. Signal waves are transmitted through on antenna.
- Receiver....** Receives the signals from the transmitter and send them to the servos.
- Servo.....** They move the control mechanism of a model car in accordance with the signals from the receiver.
- Antenna.....** An antenna on the transmitter sends signals, and one on the receiver accepts them. They should be fully extended.
- Trim Lever....** They will adjust the neutral position of servos, thus regulate the steering and advancing controls finely.
- Battery .... Meter** You can tell the amount of electricity in a battery and how the signals are emitted.
- Servo 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.

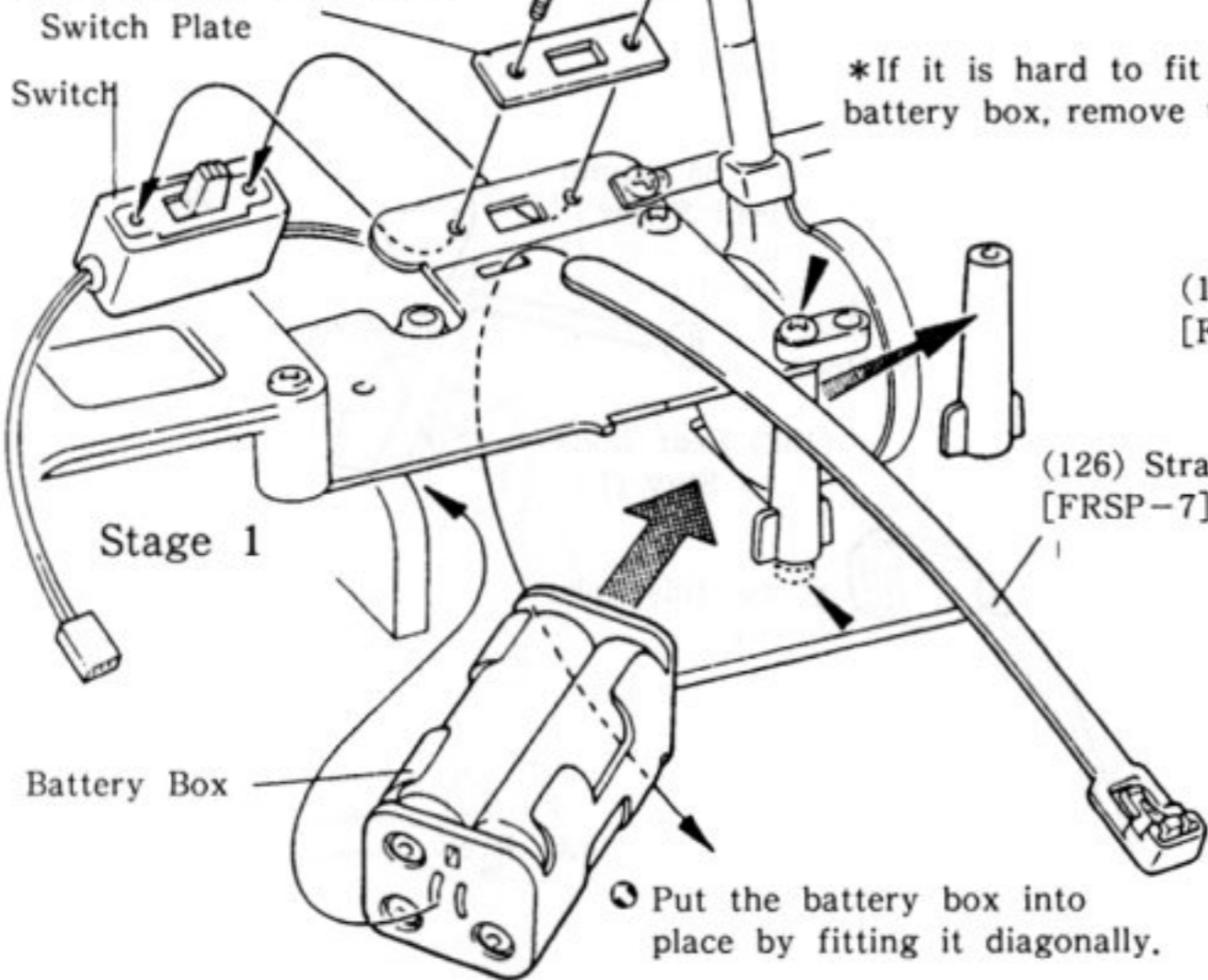
### 16 INSTALLATION OF SERVO



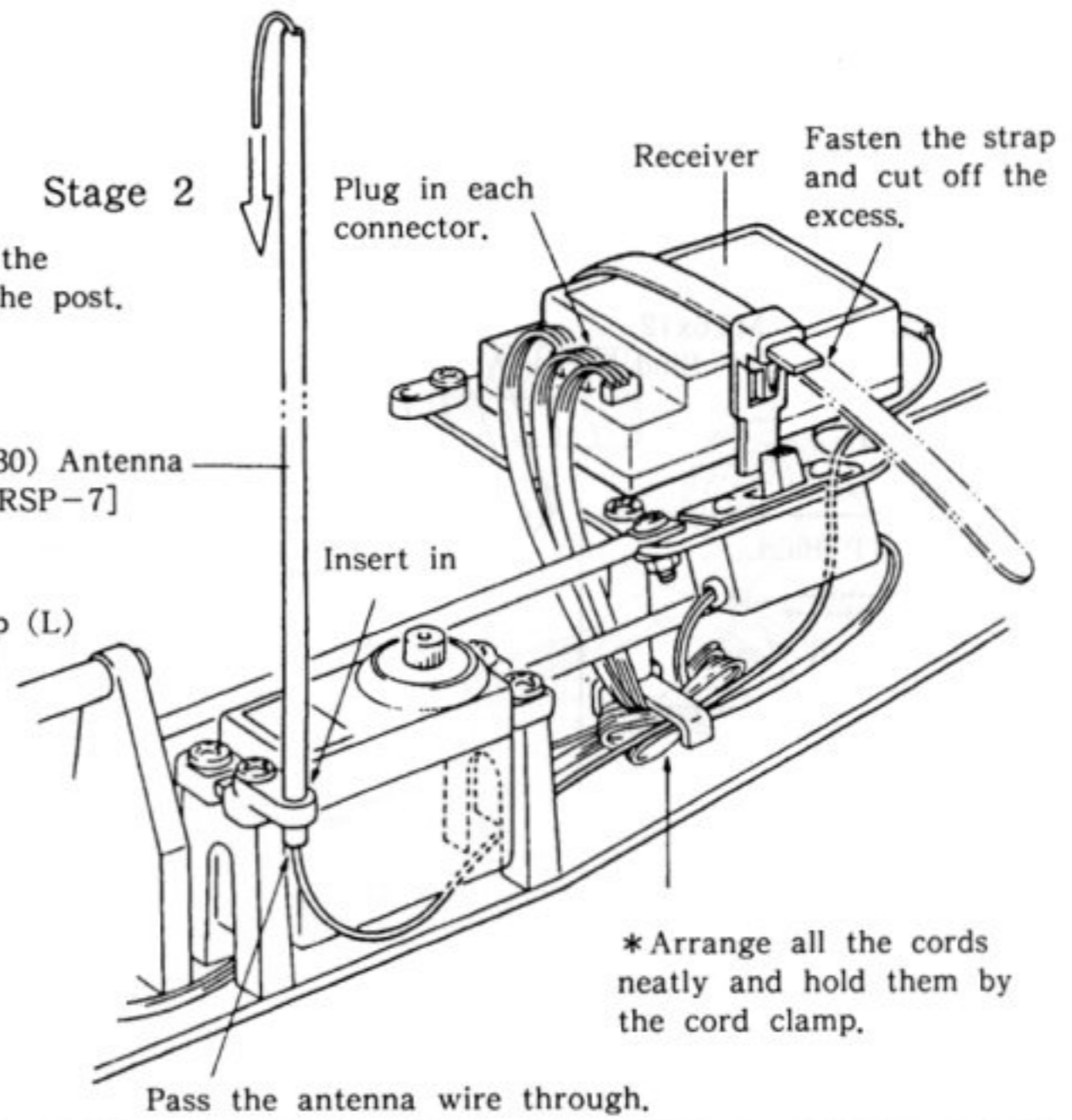
\*Route the servo leads through the legs of the servo mount.

# 17 INSTALLATION OF RADIO SYSTEM

The screws which are provided with your radio.



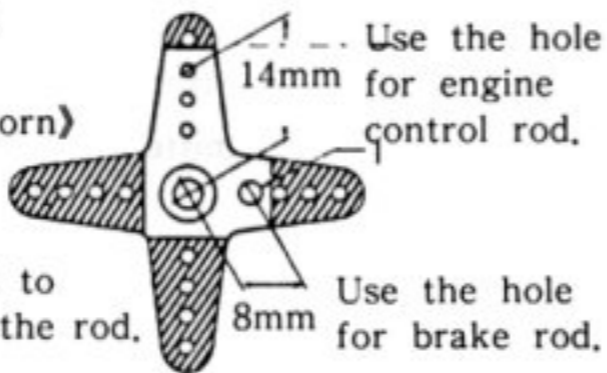
Stage 2



# 18 ENGINE CONTROL LINKAGE

Stage 1

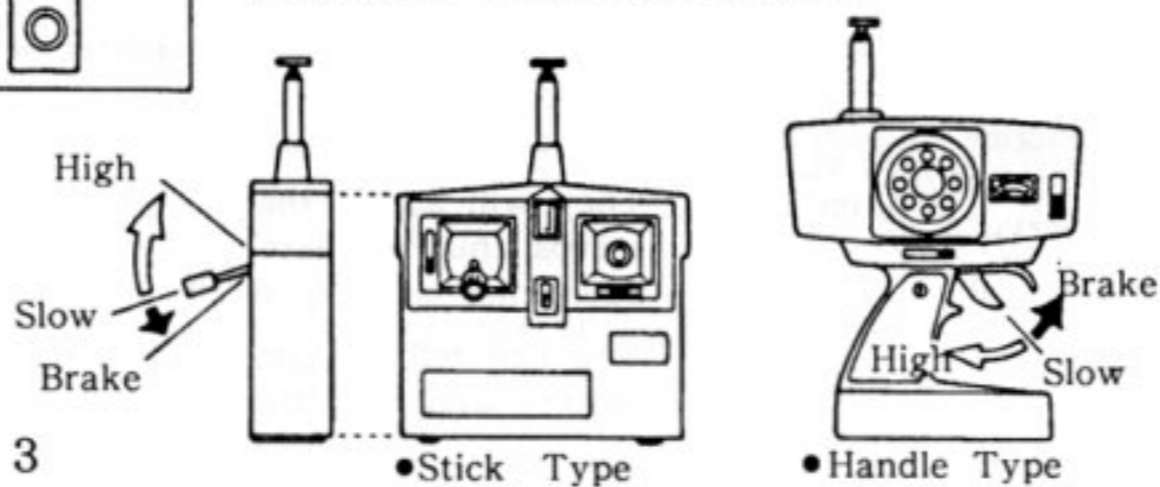
(Cutting of servo horn)  
Cut off the shaded area.



\*Enlarge the hole to the thickness of the rod.

Stage 2

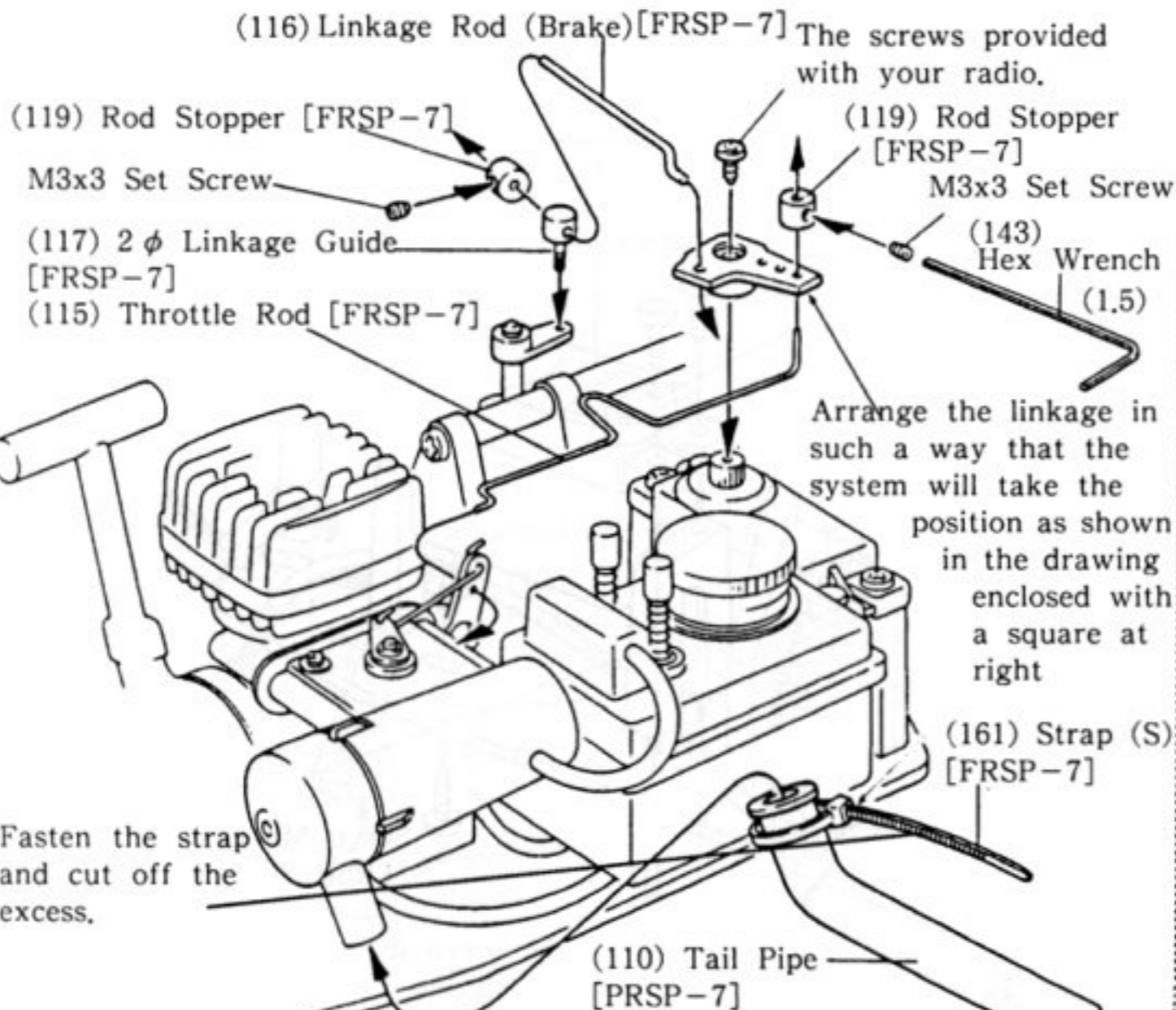
(Position of engine control stick)



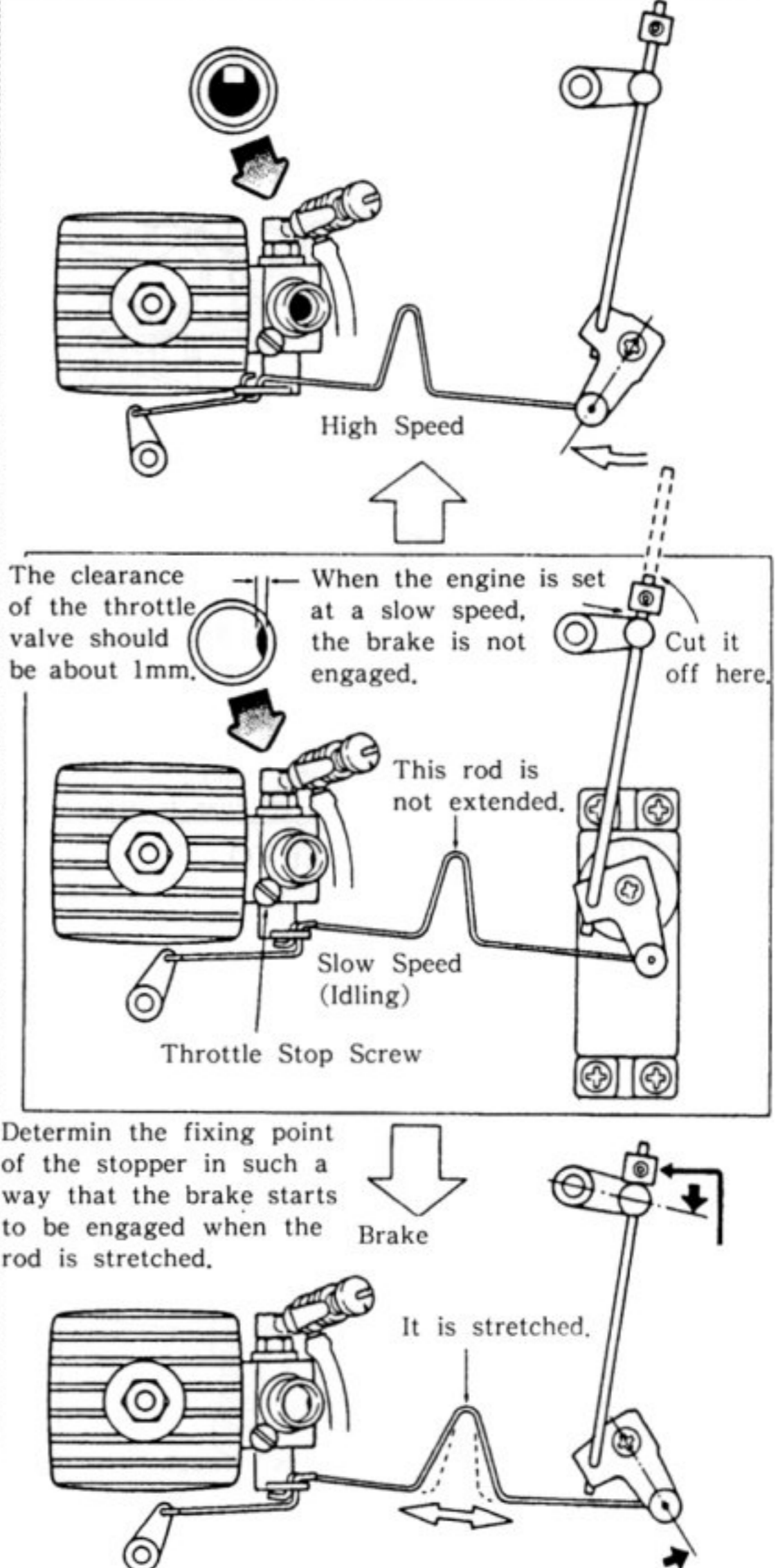
Stage 3

•Stick Type

•Handle Type

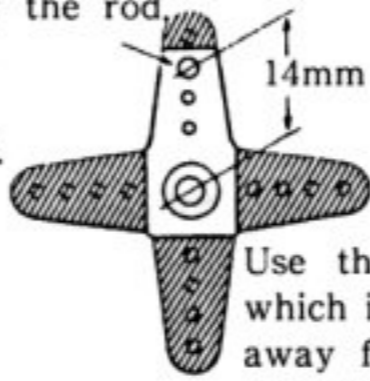


<Correlative movement of servo horn and control rod>

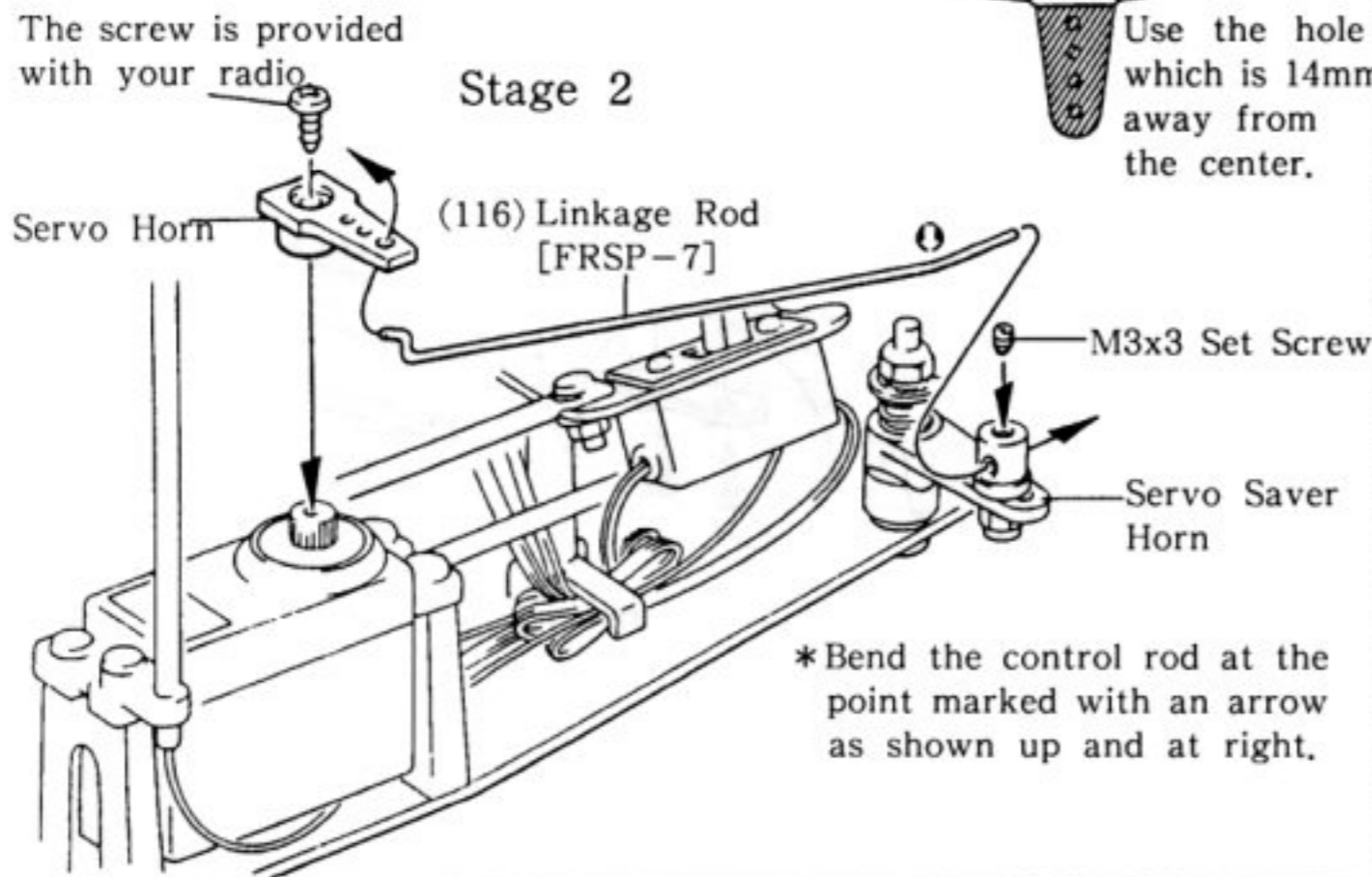


## 19 STEERING LINKAGE

Enlarge the hole to the thickness of the rod.  
**Stage 1**  
 (Cutting of servo horn)  
 Cut off the shaded area.



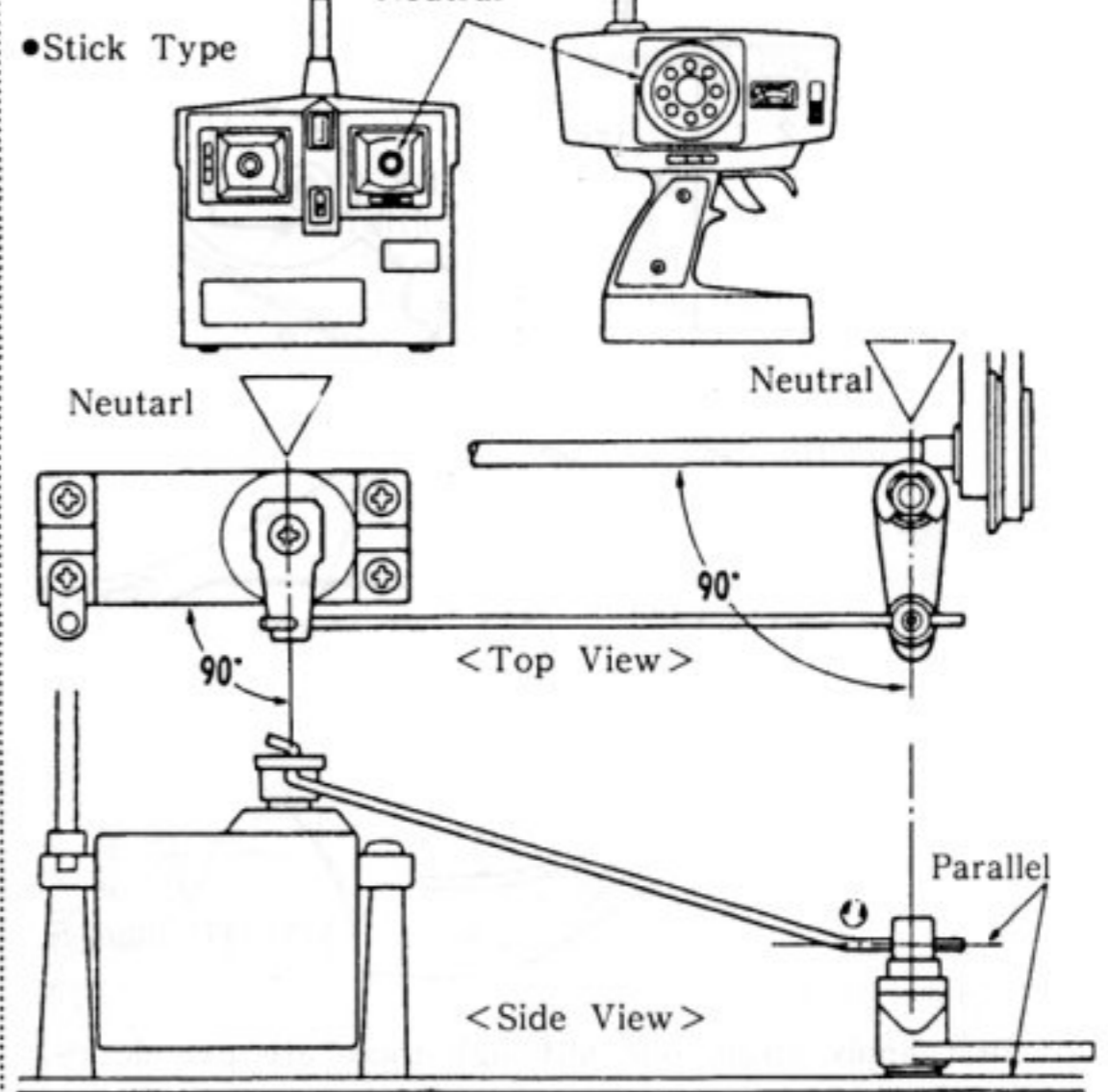
**Stage 2**  
 Use the hole which is 14mm away from the center.



<Position of steering stick>  
 Neutral

•Stick Type

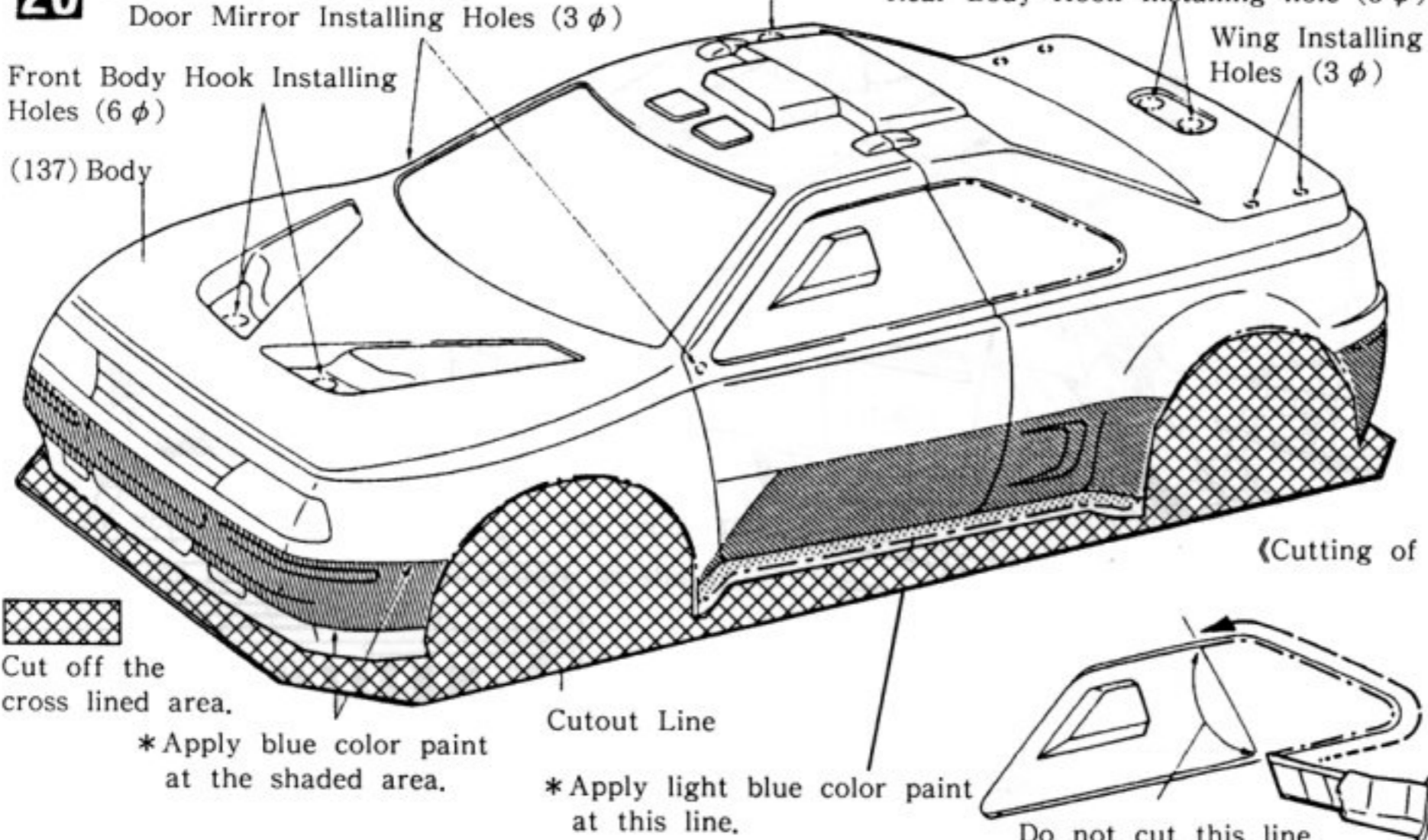
•Handle Type



## ● CUTTING AND MOUNTING BODY 20 - 23

### 20 CUTTING OF BODY

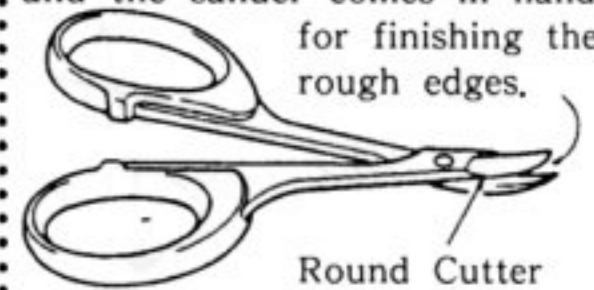
Make a hole for passing the antenna. (5 φ)  
 Rear Body Hook Installing hole (5 φ)  
 Wing Installing Holes (3 φ)



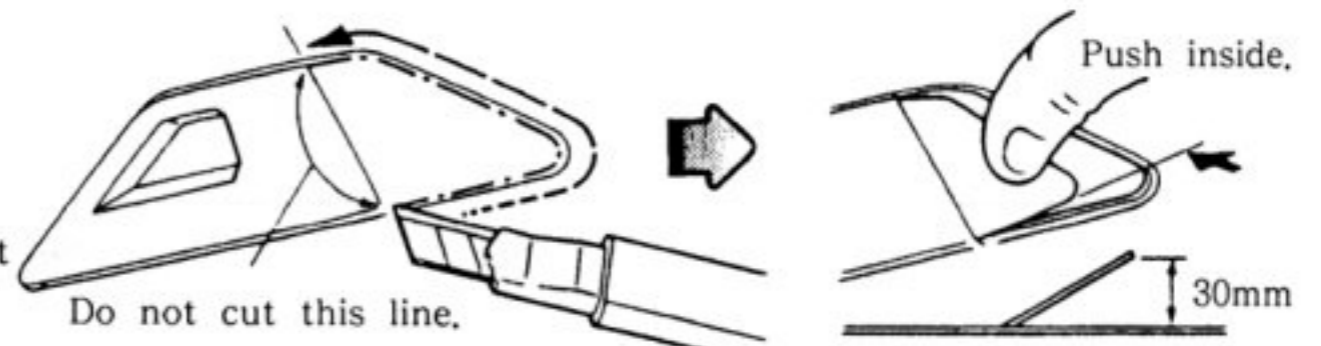
Round Cutter & Sander

**KYOSHO** NO.1829

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



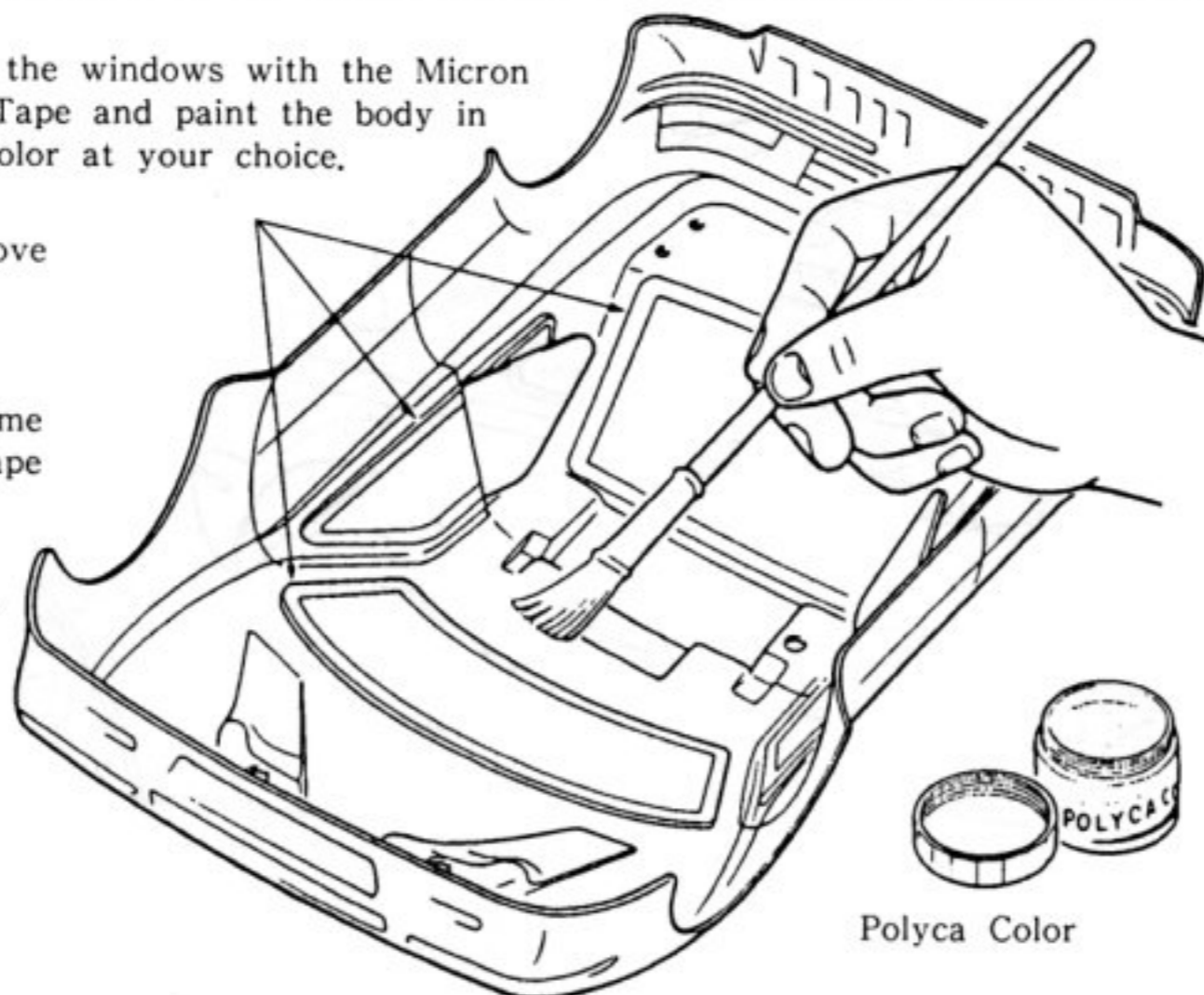
(Cutting of the side windows)



### 21 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. Rinse thoroughly. Paint the inside of body. You can obtain a color scheme by making a portion with tape then removing the tape and painting. Apply the lightest color last.

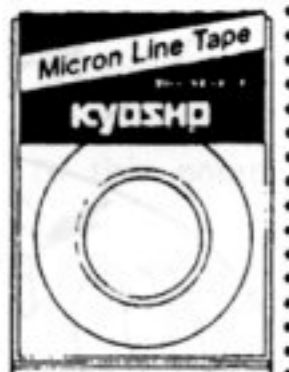


Micron Line Tape

**KYOSHO**

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

Color : White, Red, Yellow, Green, Blue and Black



Polyca Color No.2230

**KYOSHO**

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

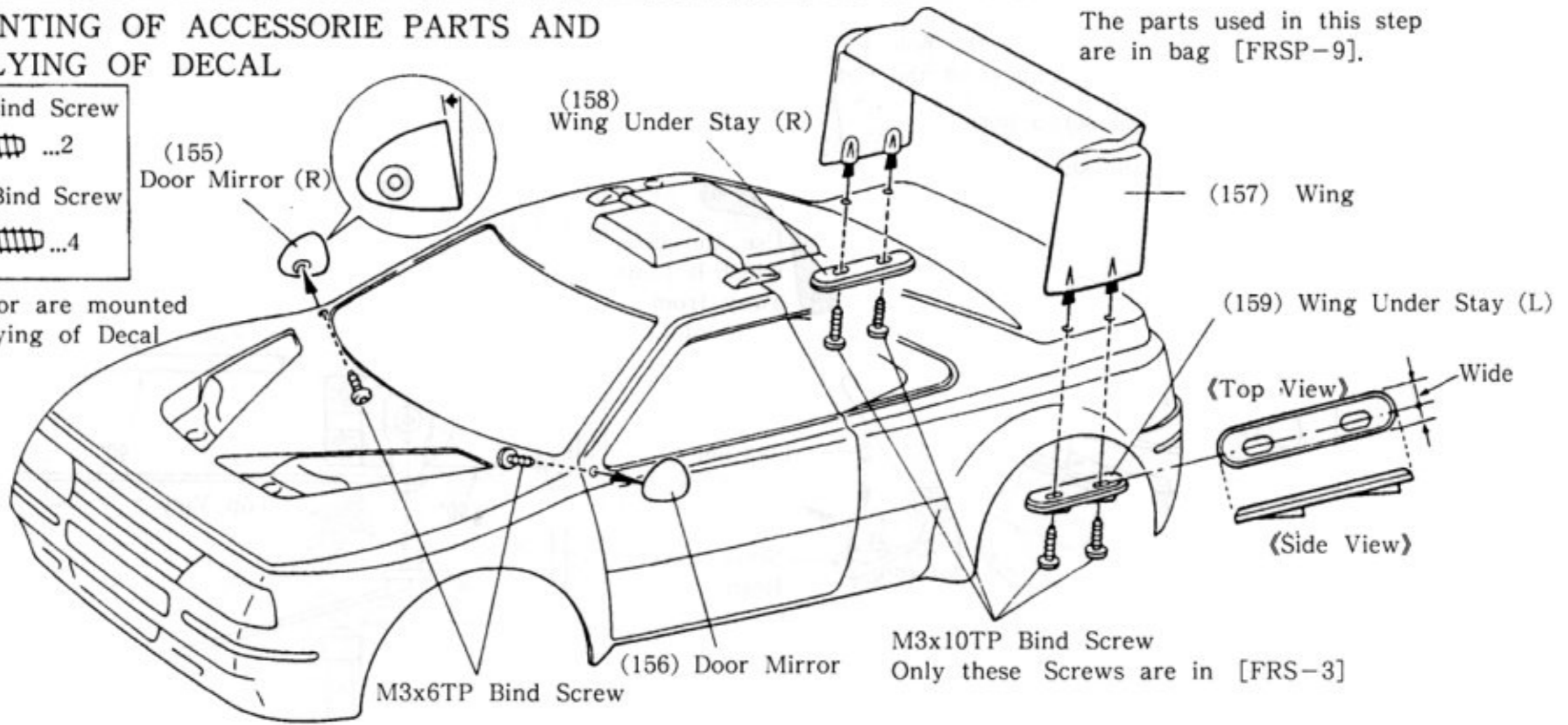


Polyca Color

## 22 MOUNTING OF ACCESSORIE PARTS AND APPLYING OF DECAL

- M3x6TP Bind Screw ...2
- M3x10TP Bind Screw ...4

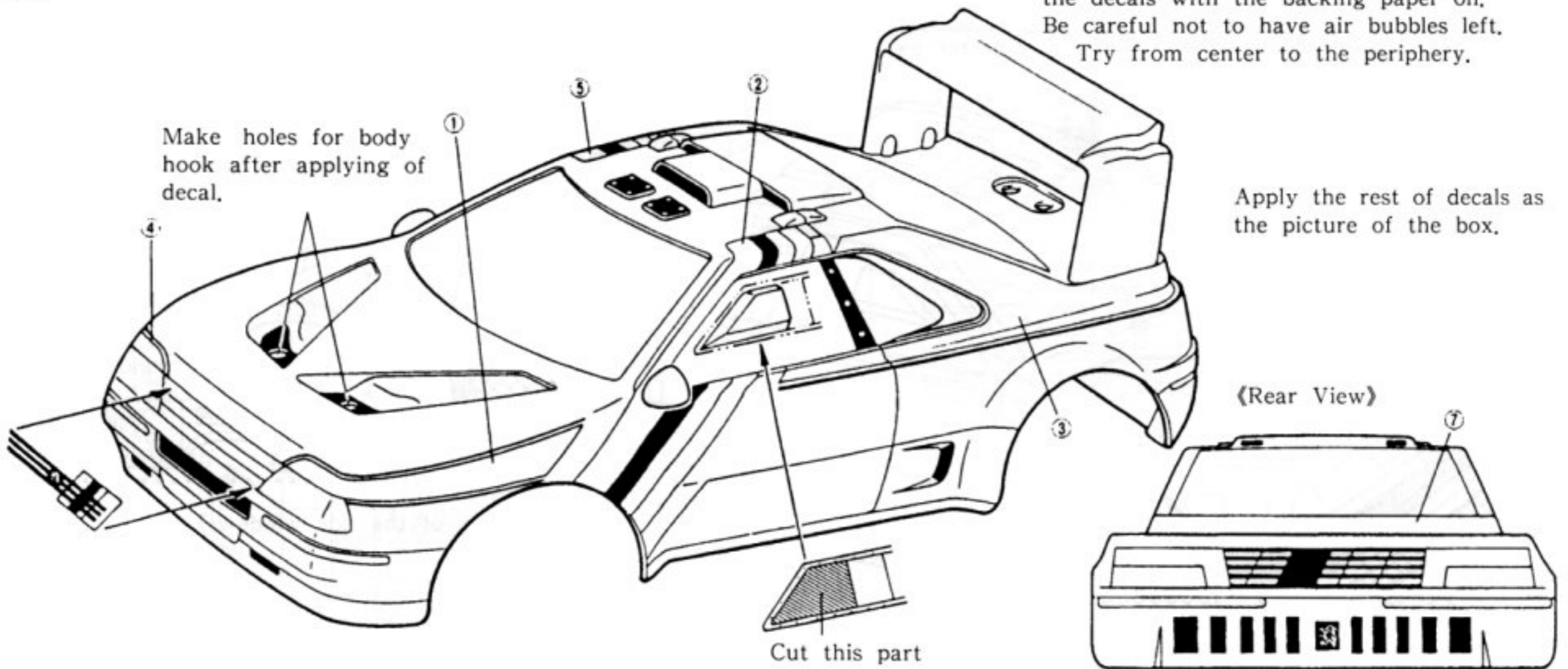
Door Mirror are mounted after applying of Decal



The parts used in this step are in bag [FRSP-9].

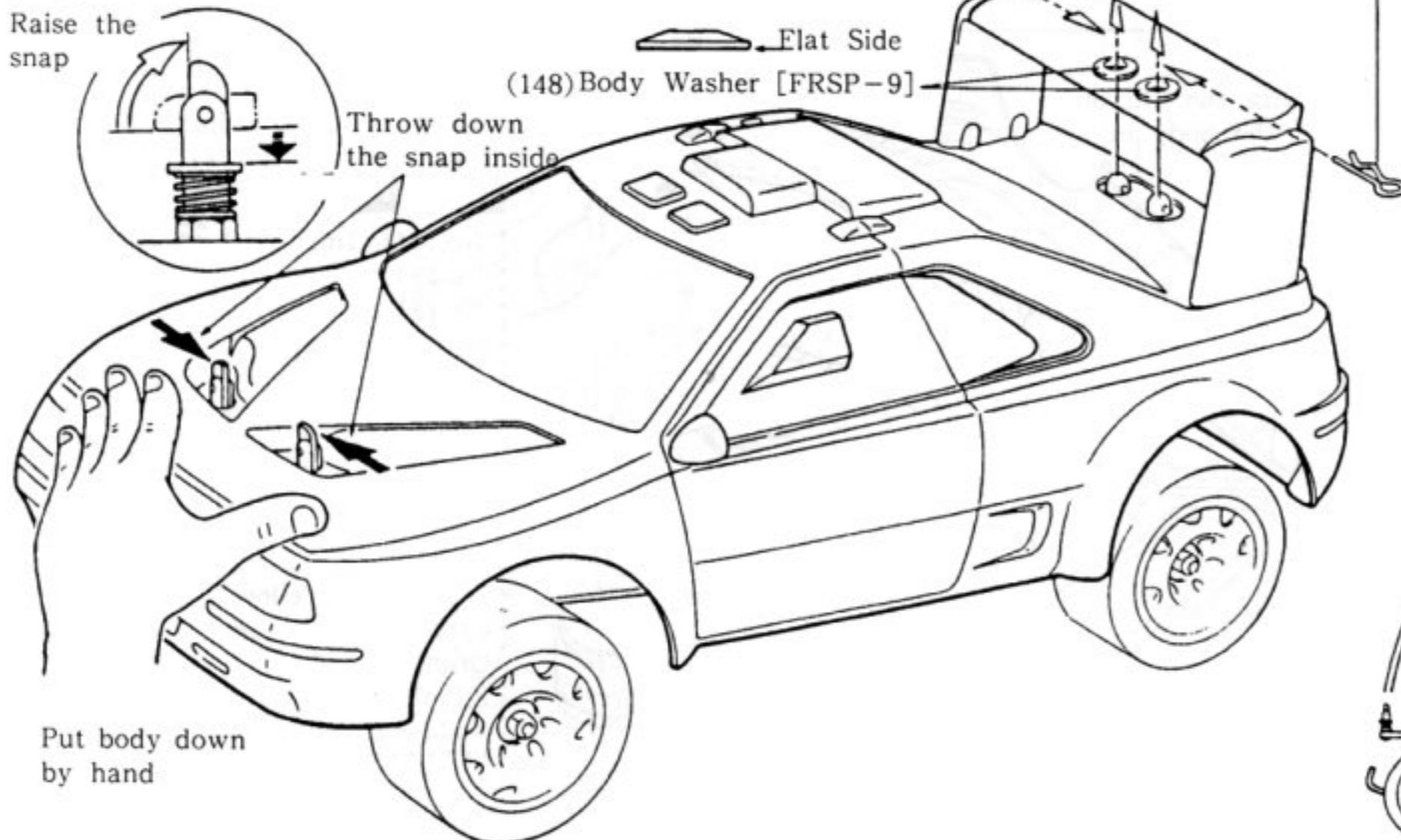
The first, apply straub one, although there are two decals. Straub decal is made of lengthen material because of applying on carved surface.

Cut off the decals along the cutout line with scissors. Convince yourself of the position by trying the decals with the backing paper on. Be careful not to have air bubbles left. Try from center to the periphery.

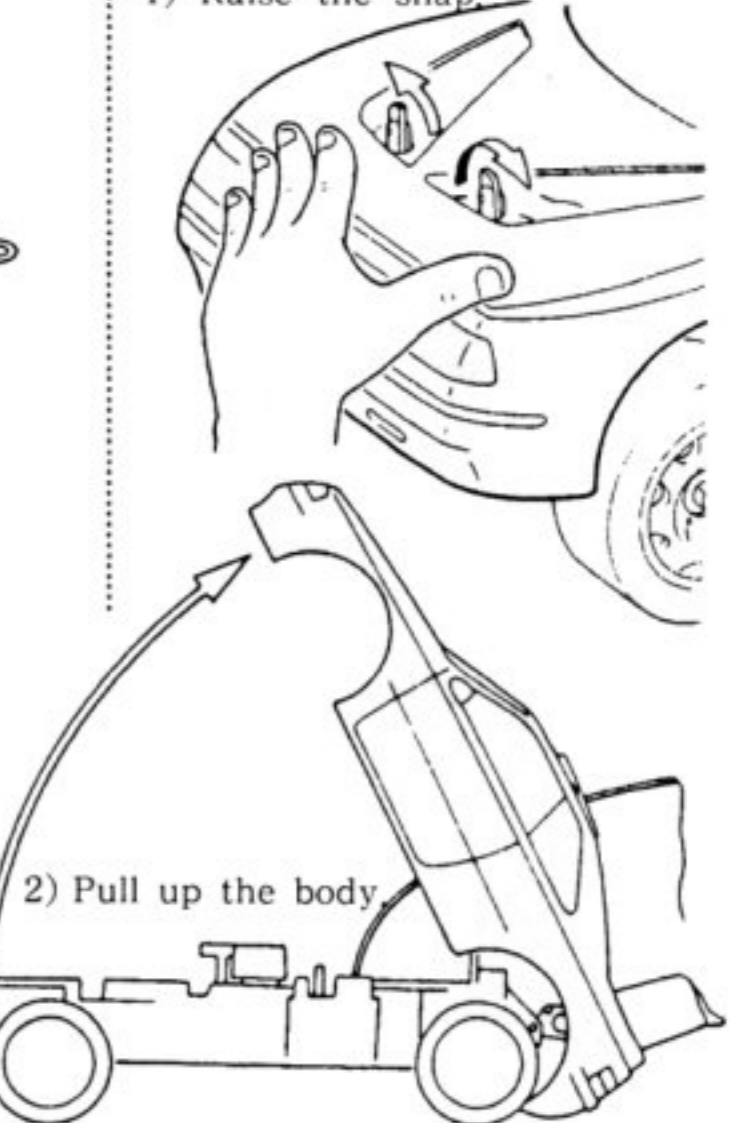


## 23 MOUNTING OF BODY

Raise the snap



1) Raise the snap

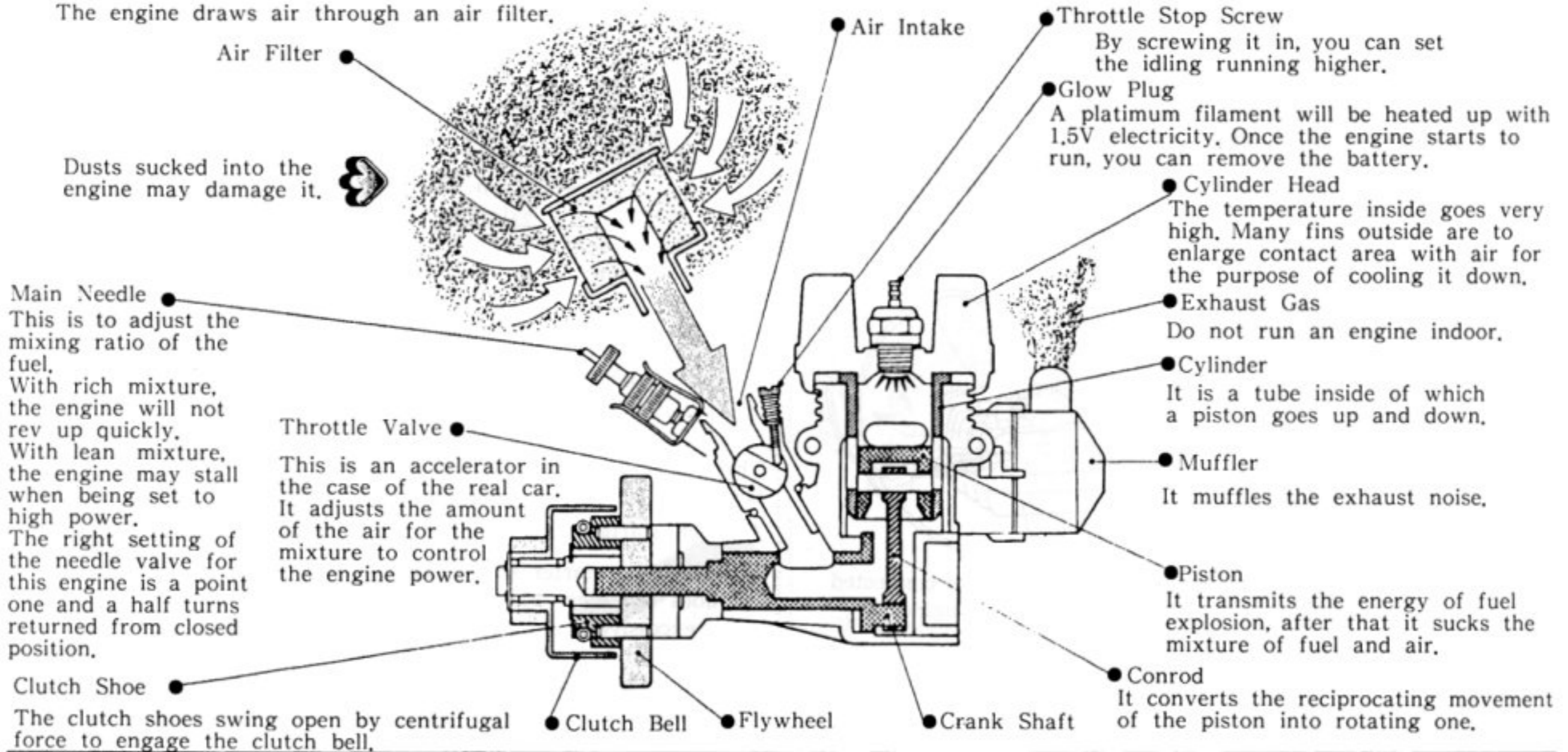


# GLOW ENGINE

● Your previous knowledge of the engine structure is very beneficial, particularly for those who handle an engine powered model car for the first time.

● The fuel is a mixture of alcohol with some additives. You can not use gasoline or kerosene for this type of engines.

The engine draws air through an air filter.



**Main Needle**  
This is to adjust the mixing ratio of the fuel. With rich mixture, the engine will not rev up quickly. With lean mixture, the engine may stall when being set to high power. The right setting of the needle valve for this engine is a point one and a half turns returned from closed position.

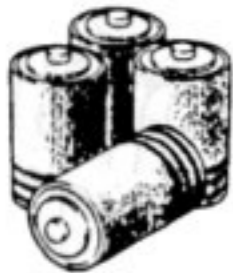
**Throttle Valve**  
This is an accelerator in the case of the real car. It adjusts the amount of the air for the mixture to control the engine power.

**Clutch Shoe**  
The clutch shoes swing open by centrifugal force to engage the clutch bell.

## STARTING ENGINE (1)

\*The following things should be prepared to start an engine.

4 Unit #1 (D-size) Dry cells



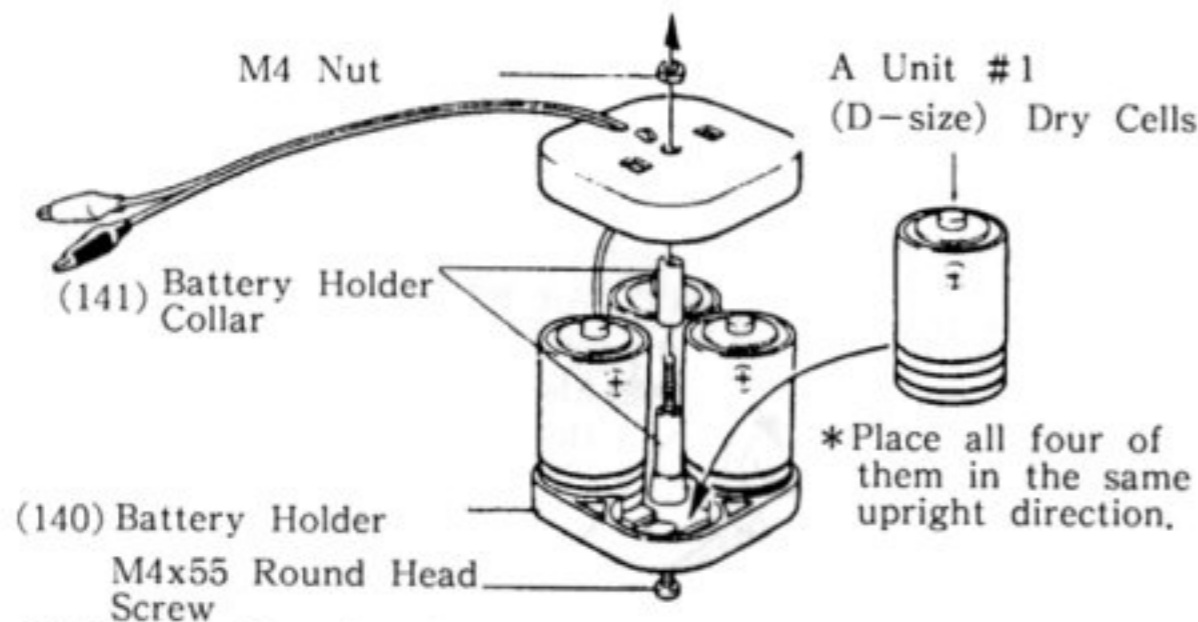
**Glow Fuel**  
A can of 1 liter or 2.

\*Gasoline or kerosene cannot be used.



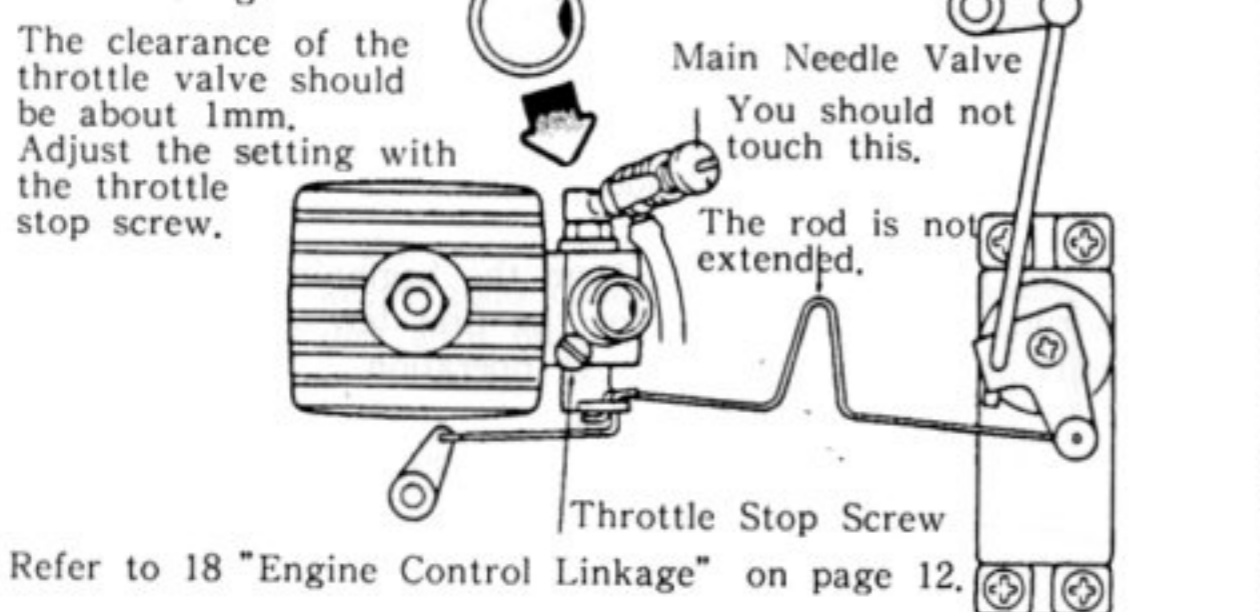
● Now you start the engine. Follow the procedures.

1) Fit the dry cells into the battery as shown.



2) Set the throttle valve to idling position and check to see if the brake is engaged or not.

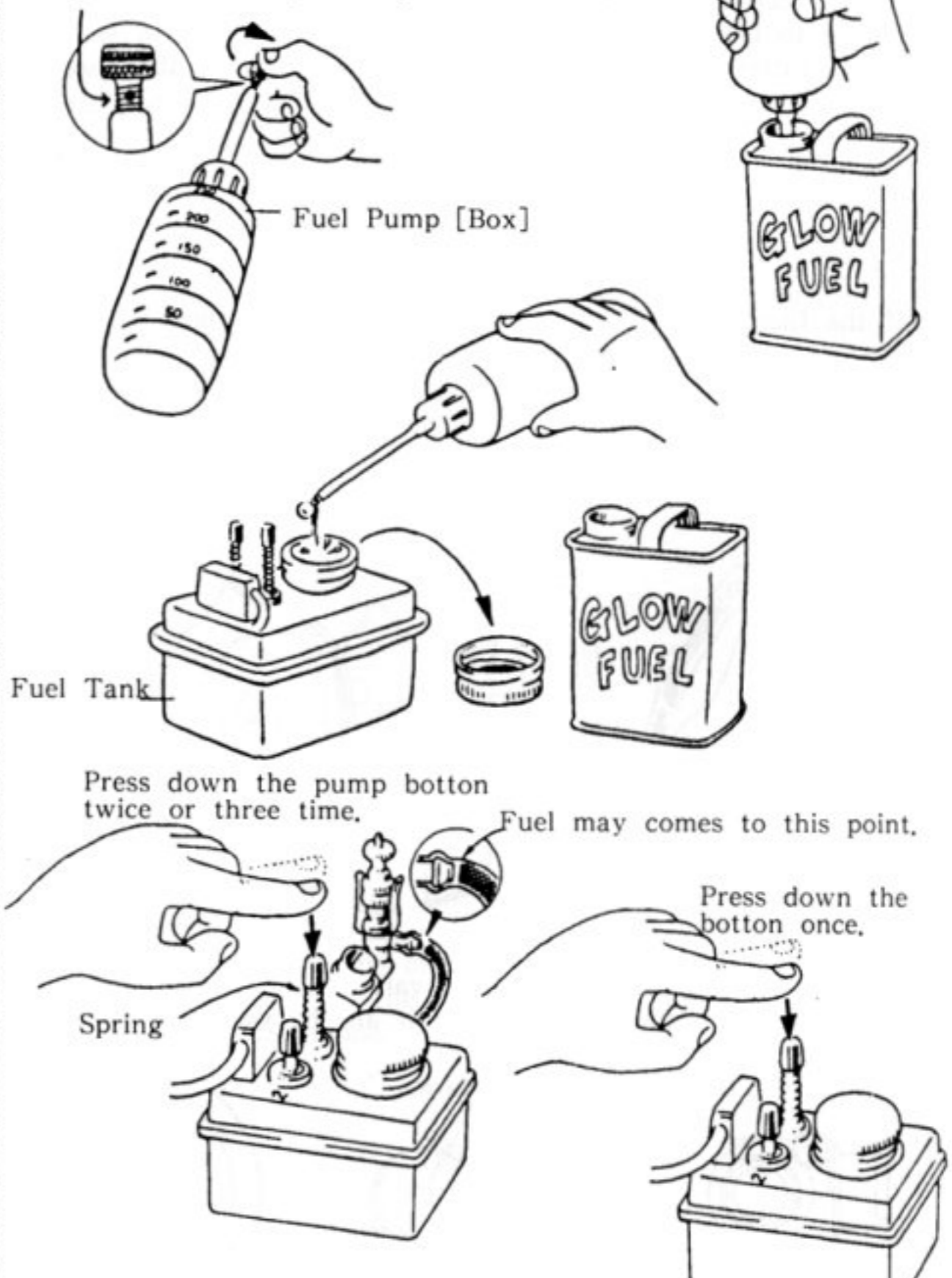
When the engine is set at a slow speed, the brake is not engaged.



Refer to 18 "Engine Control Linkage" on page 12.

3) Fill the fuel tank with a feeder.

Screw out the cap until you see a hole.

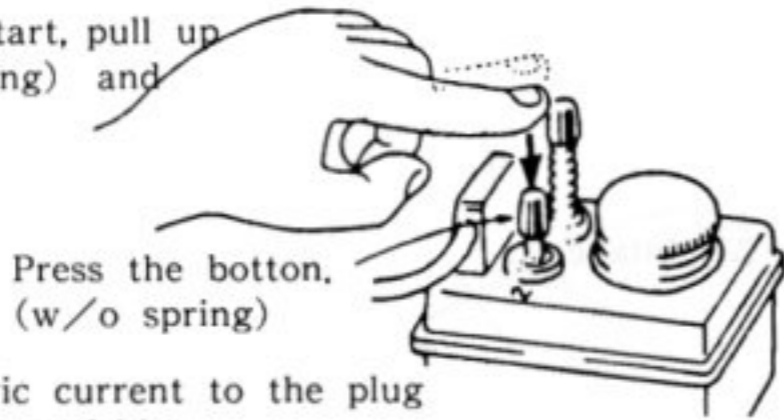


Press down the pump bottom twice or three time.

Press down the bottom once.

## STARTING ENGINE (2)

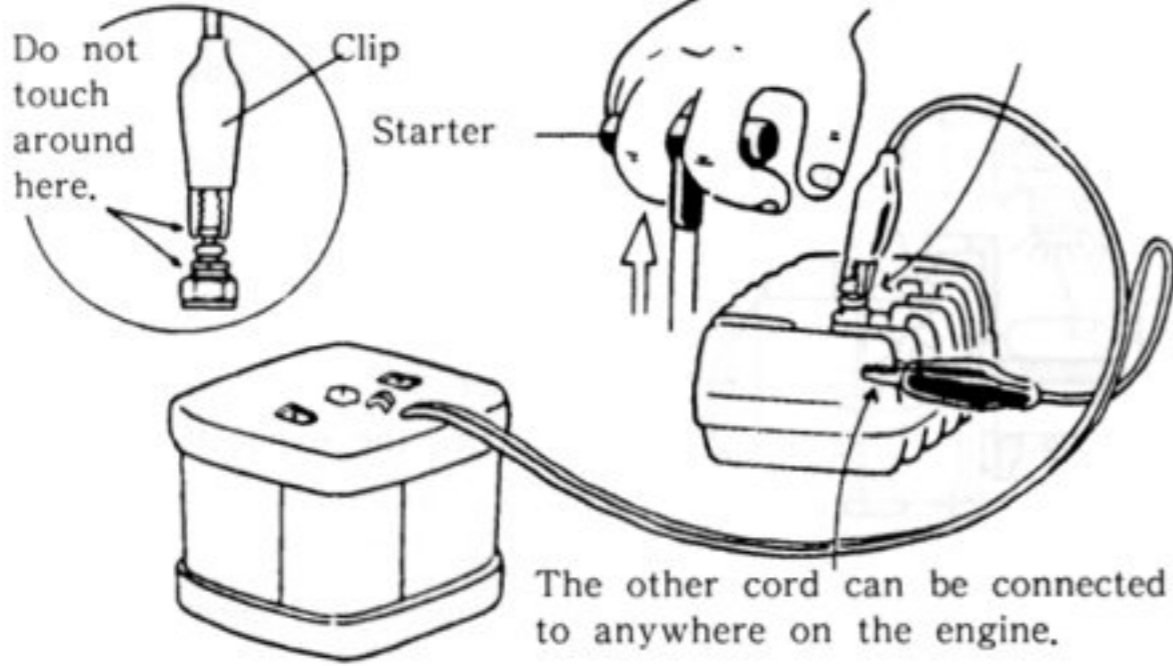
When it is hard to start, pull up the bottom (w/o spring) and press down twice.



Press the bottom, (w/o spring)

- 5) Turn on an electric current to the plug and pull the starter quickly.

Connect the heating cord with the clip to the head of the plug.



The other cord can be connected to anywhere on the engine.

- 6) When the engine does not start, Repeat the process (4) and (5).

- 7) In case the engine still does not start, remove the plug and electrify it.

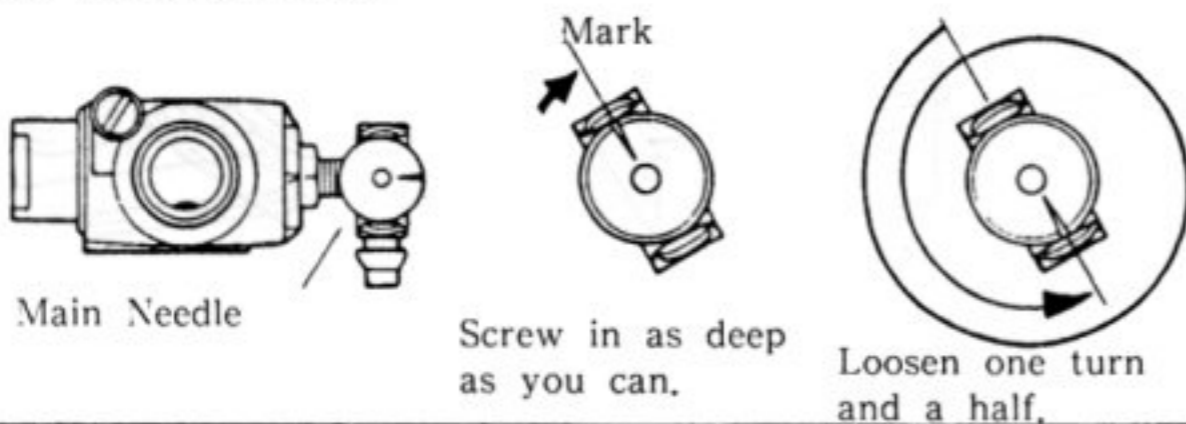
If it does not become red-hot, one of the following causes is conceivable: the battery is discharged, poor contact in the electric circuit, the filament of the plug is burnt out. Try to brush the clips in a dirt place, if you see a spark, the battery is in good. Then you should change the plug.

If the filament becomes red-hot, try the steps (4) and (5).

Short-circuit them for a moment.



- 8) Check to see if the main needle valve is set properly. If it is out of adjustment, tighten it all the way and loosen one turn and a half.

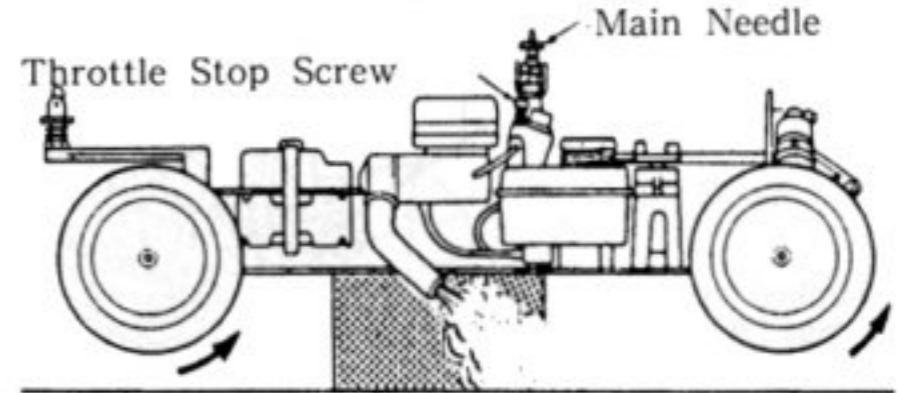


Main Needle

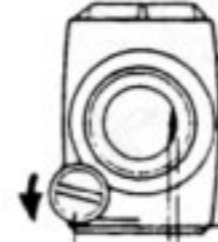
Screw in as deep as you can.

Loosen one turn and a half.

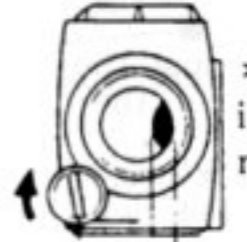
- 9) When the engine starts running, disconnect the clips and take a look at its idle-running. If it is too fast, the wheels may begin to rotate. If it is too slow, the engine will discontinue to run.



Put the model on a box or anything like that, to make it aloof from the ground.



\*By screwing it out, the rate of rotation decreases.



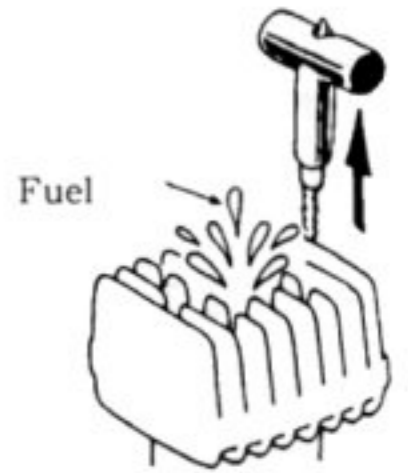
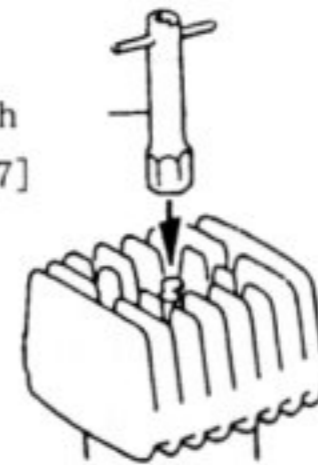
\*By screwing in, the engine revs up.

Throttle Stop Screw 1mm (Normal Setting)

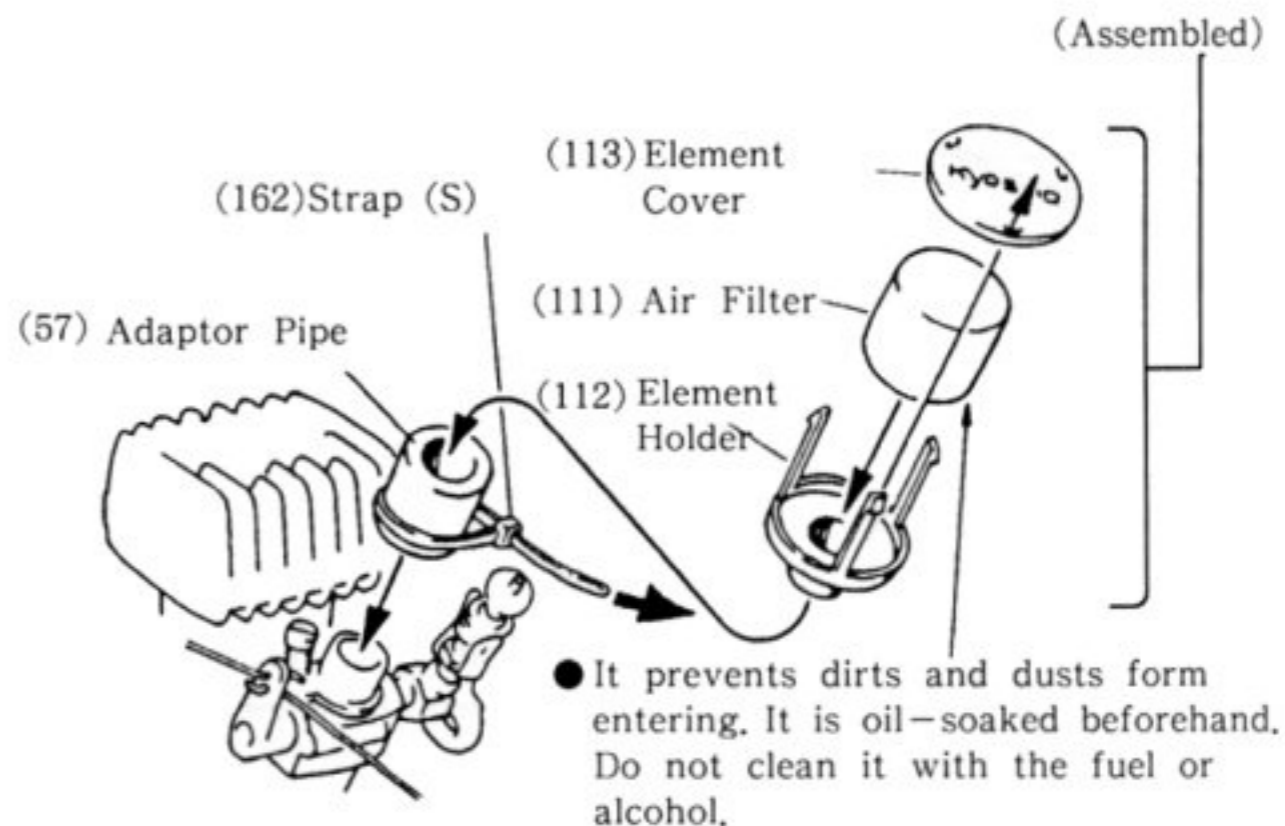
- When starter rope is much more resistable to pull up...

Even if the starter rope is much more resistable to pull up, it does not mean that the engine is out of order. But excessive amount of fuel is fed into the cylinder. This called a state of "flooded". Remove the flow plug with a plug wrench and pull up the starter rope ten or twenty times with quick pulling to discharge the excessive fuel.

- (136) Plug Wrench [FRSP-7]

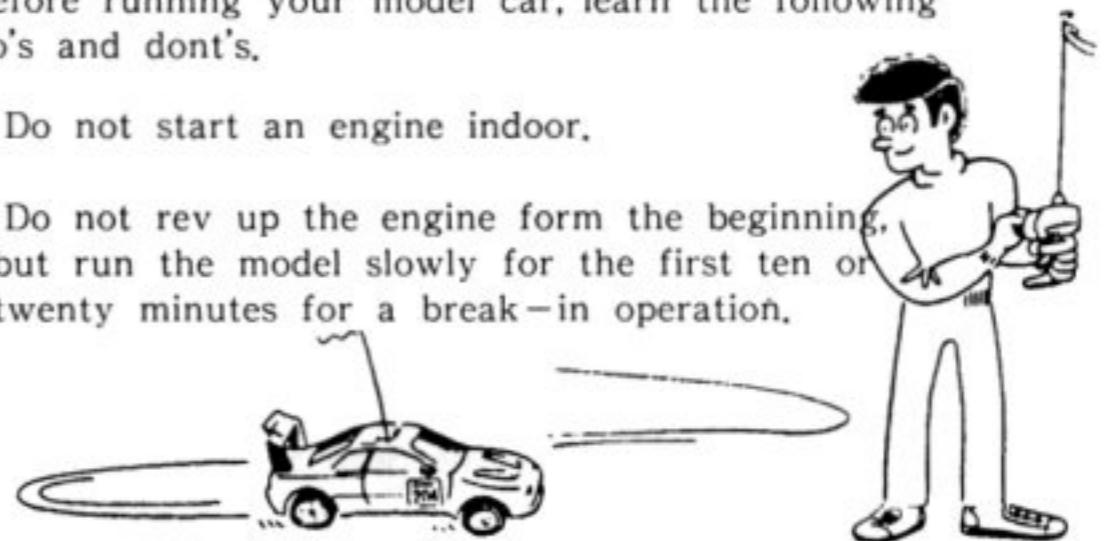


- Installation of air cleaner  
The air cleaner parts are in bag [FRSP-7].



- Before running your model car, learn the following do's and don't's.

- 1) Do not start an engine indoor.
- 2) Do not rev up the engine from the beginning, but run the model slowly for the first ten or twenty minutes for a break-in operation.



## STARTING ENGINE (3)

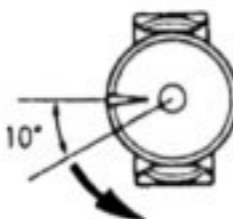
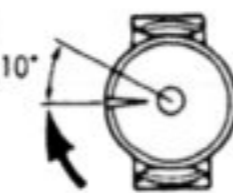
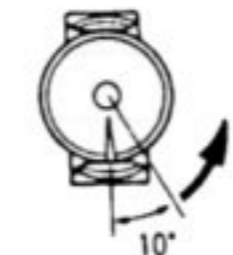
3) When you set the throttle lever to the high position, the engine stalls...In this case, screw out the main needle valve a little.

Main Needle



If the car runs slowly, close the main needle valve little by little, 10°

In case you close the main valve excessively, the engine will not rev up even when the throttle valve is set to high position. Open the needle valve 10° immediately.



4) Overheating of the engine

The engine may be overheated when running over the places stated below, and the engine performance will deteriorate remarkably. Try not to run your car over a thickly grassy place or in a pebbly area with very bumpy surface.

Very grassy place.



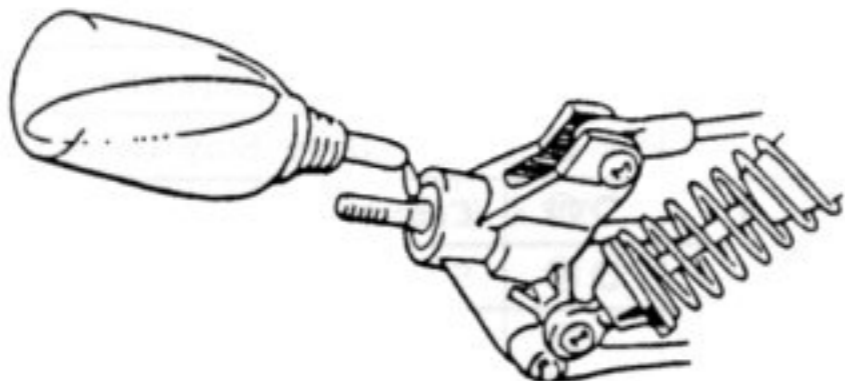
A vumpy surface.

5) In case the air filter falls off, stop the operation at once. Or the engine will be ruined.

6) When the engine stalls while running, it may be hard to start again promptly. In such a case, wait till the engine cools down sufficiently and try to start it.

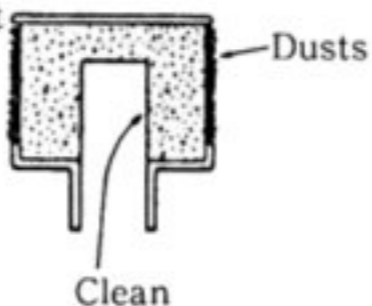


7) Oil the plate bearing portion from time to time.



8) Even when the outside looks filthy, the inside keeps good condition. Do not wash the dirt with oil or alcohol.

If you washed it, saturate the filter with castor oil or the oil you used for the oil shocks.

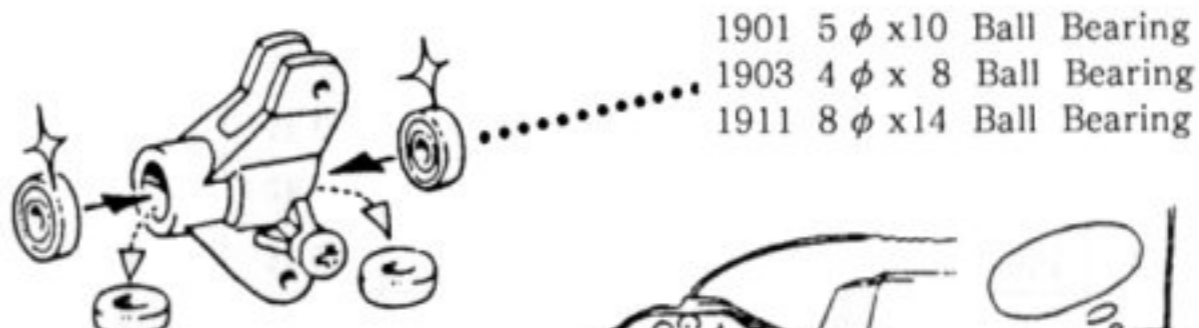


9) Always check the inside of the carburetor to see if there is any dust. A dusty carb means that the engine is in poor condition. Pour the fuel into the air filter and leave it until the alcohol is vaporized before refitting it.



10) Replace ball bearings

Increase the speed and running time by using ball bearings instead of plain bearings.



1901 5 φ x10 Ball Bearing  
1903 4 φ x 8 Ball Bearing  
1911 8 φ x14 Ball Bearing

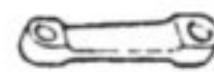


11) Span of engine life

What shortens the engine life are a dust in the engine and overheating. If you notice the engine is hard to start, or its idling is not stable, or it will not keep running without the heating cords attached to the engine, its life comes close to the end. Still you can restore an old engine by changing the piston, sleeve, and con-rod.



ABC Piston & Cylinder

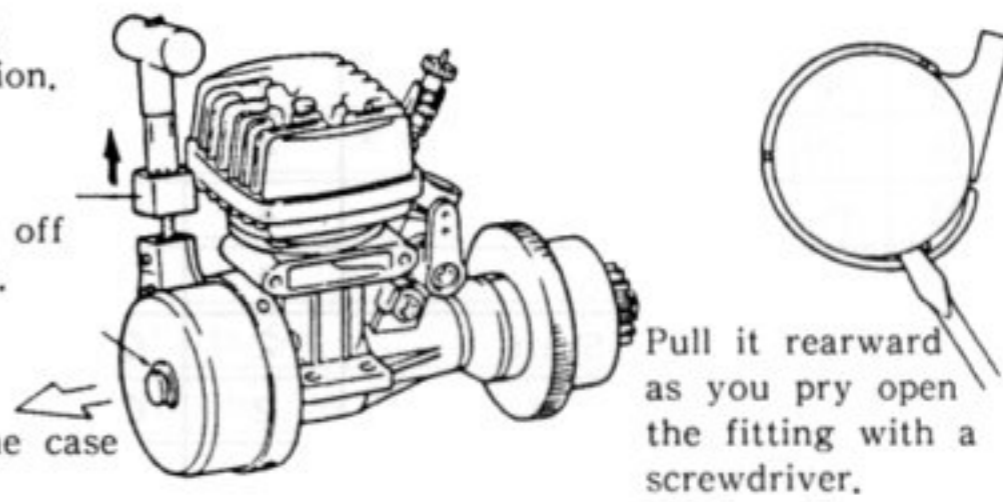


Con-rod

Pull up the plastic portion.

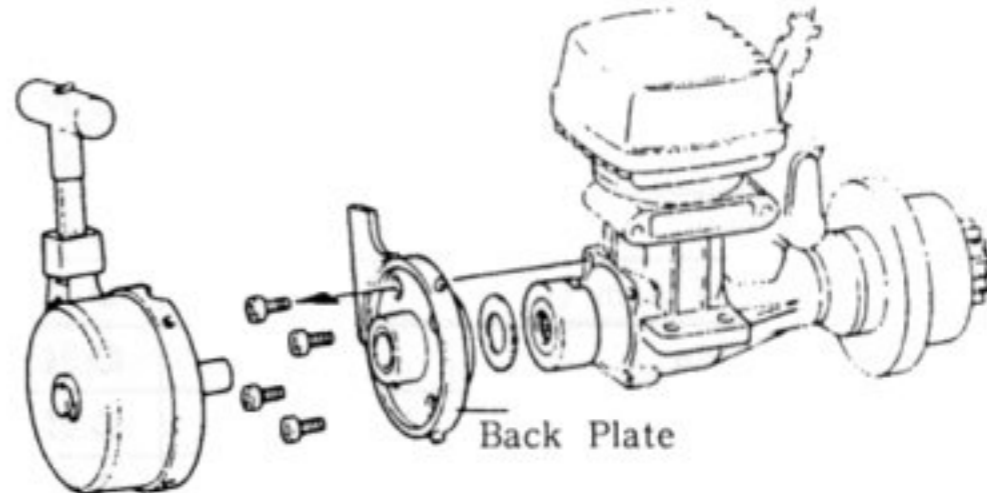
Never take off the E Ring.

Pull out the case rearward.



Pull it rearward as you pry open the fitting with a screwdriver.

Case



Back Plate

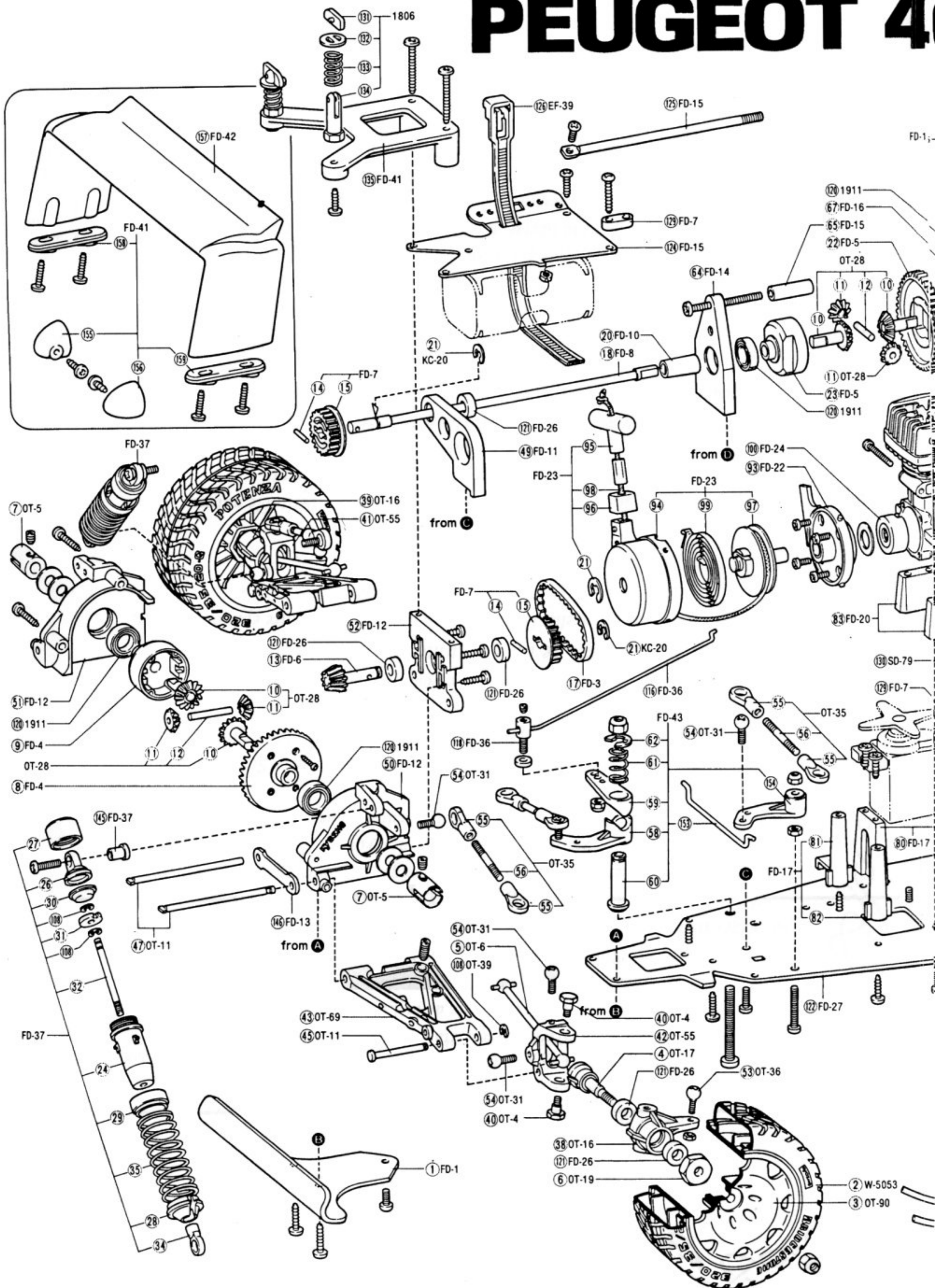
\*After taking off the back plate, you can go on in the same way as you do with other type of engines. Refer to the operation instruction of the OS engine.

## Parts List

(© marked parts are assembled.)

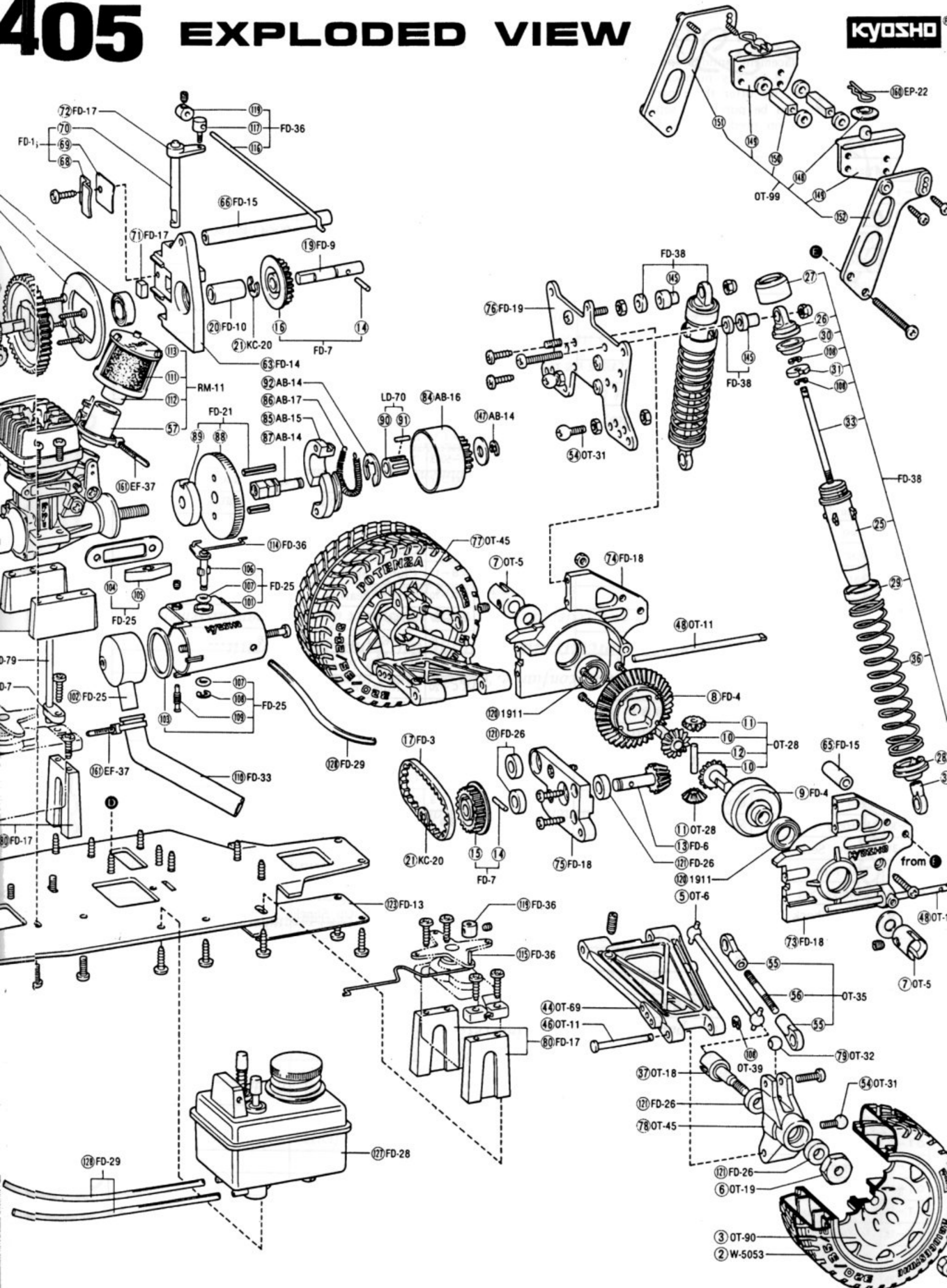
Key #	Parts Name	Q'ty	Key #	Parts Name	Q'ty	Key #	Parts Name	Q'ty
①	Bumper	1	⑤⑤	Ball End	12	①①	Nozzle	1
②	Tire	4	⑤⑥	Ball End Rod	6	①②	Tail Pipe	1
③	Wheel	4	⑤⑦	Adaptor Pipe	1	①③	Air Filter Element	1
④	Front Wheel Shaft	2	①⑤⑧	Servo Saver (A)	1	①④	Element Holder	1
⑤	Swing Shaft	4	①⑤⑨	Servo Saver (B)	1	①⑤	Element Cover	1
⑥	Drive Washer	4	①⑥⑩	Servo Saver Shaft	1	①⑥	Valve Rod	1
⑦	Joint	4	①⑥⑪	Servo Saver Spring	1	①⑦	Throttle Rod	1
⑧	Final Diff. Case (A)	2	①⑥⑫	E Ring (E-5)	1	①⑧	Linkage Rod	2
⑨	Final Diff. Case (B)	2	①⑥⑬	Center Diff. Mount (A)	1	①⑨	2 φ Linkage Guide	1
⑩	Bevel Gear (A)	6	①⑥⑭	Center Diff. Mount (B)	1	①⑩	3 φ Linkage Guide	1
⑪	Bevel Gear (B)	6	①⑥⑮	Joint Collar (S)	2	①⑪	Rod Stopper	2
⑫	Bevel Shaft	3	①⑥⑯	Joint Collar (L)	1	①⑫	8 φ x14 Ball Bearing	6
⑬	Final Pinion	2	①⑥⑰	Disk Plate	1	①⑬	5 φ x10 Plain Bearing	14
⑭	Pin (2 φ x11)	4	①⑥⑱	Brake Pad (A)	1	①⑭	Chassis	1
⑮	Timing Pulley (A)	2	①⑥⑲	Brake Pad (B)	1	①⑮	Chassis Cover	1
⑯	Timing Pulley (B)	2	①⑥⑳	Brake Cam Shaft	1	①⑯	Radio Plate	1
⑰	Belt	2	①⑥㉑	Brake Cam	1	①⑰	Joint Rod	1
⑱	Front Counter Shaft	1	①⑥㉒	Brake Horn	1	①⑱	Strap (L)	1
⑲	Rear Counter Shaft	1	①⑥㉓	Rear Bulk Head (L)	1	①⑲	Fuel Tank	
⑳	Counter Shaft Joint	2	①⑥㉔	Rear Bulk Head (R)	1	①㉑	Fuel Pipe	3
㉑	E Ring (E-4)	5	①⑥㉕	Rear Housing	1	①㉒	Antenna Holder	2
㉒	Center Diff. Case (A)	1	①⑥㉖	Shock Stay	1	①㉓	Antenna	1
㉓	Center Diff. Case (B)	1	①⑥㉗	Rear Hub (L)	1	①㉔	Snap	2
㉔	Front Shock Case	2	①⑥㉘	Rear Hub (R)	1	①㉕	Body Hook Washer	2
㉕	Rear Shock Case	2	①⑥㉙	5.8 φ Ball	2	①㉖	Body Hook Spring	2
㉖	Shock Cap	4	①⑥㉚	Servo Mount	4	①㉗	Front Body Hook	2
㉗	Shock Ring	4	①⑥㉛	Radio Plate Post (A)	1	①㉘	Front Body Stay	1
㉘	Spring Holder	4	①⑥㉜	Radio Plate Post (B)	1	①㉙	Plug Wrench	1
㉙	Spring Spacer	4	①⑥㉝	Engine Mount	2	①㉚	Body Peugeot 405	1
㉚	Pressure Top	4	①⑥㉞	Clutch Bell	1	①㉛	Fuel Pump	1
㉛	Shock Piston	4	①⑥㉟	Clutch Shoe	2	①㉜	Shock Oil	1
㉜	Front Shock Shaft	2	①⑥㊱	Clutch Spring	1	①㉝	Battery Holder	
㉝	Rear Shock Shaft	2	①⑥㊲	Pilot Shaft	1	①㉞	Battery Holder Collar	2
㉞	Shock End	4	①⑥㊳	Flywheel	1	①㉟	Decal	
㉟	Front Shock Spring	2	①⑥㊴	Flywheel Spacer	1	①㊱	Hexan Wrench (1,5)	1
㊱	Rear Shock Spring	2	①⑥㊵	Clutch Bearing Case	1	①㊱	Hexan Wrench (2,0)	1
㊲	Rear Wheel Shaft	2	①⑥㊶	Clutch Rollar	6	①㊱	Shock Bush	4
㊳	Knuckle Arm (R)	1	①⑥㊷	E Ring (E-7)	1	①㊱	Front Suspension Plate	1
㊴	Knuckle Arm (L)	1	①⑥㊸	Starter Holder	1	①㊱	E Ring (E-3)	1
㊵	King Pin	4	①⑥㊹	Starter Case	1	①㊱	Body Washer	2
㊶	Front Hub (R)	1	①⑥㊺	Starter Grip	1	①㊱	Rear Body Hook	2
㊷	Front Hub (L)	1	①⑥㊻	Starter Guide	1	①㊱	Body Hook Joint	2
㊸	Front Suspension Arm	2	①⑥㊼	Starter Pulley	1	①㊱	Rear Body Stay (R)	1
㊹	Rear Suspension Arm	2	①⑥㊽	Starter Rope	1	①㊱	Rear Body Stay (L)	1
㊺	Sus. Shaft (A) (Silver)	2	①⑥㊾	Spring	1	①㊱	Center Rod	1
㊻	Sus. Shaft (B) (Black)	2	①⑥㊿	One Way Bearing	1	①㊱	Side Arm	1
㊼	Sus. Shaft (C)	2	①⑥	Muffler	1	①㊱	Door Mirror (R)	1
㊽	Sus. Shaft (D)	2	①⑥	Muffler Cap	1	①㊱	Door Mirror (L)	1
①	Shaft Holder	1	①⑥	Muffler Seal (A)	1	①㊱	Wing	1
②	Front Bulk Head (L)	1	①⑥	Muffler Seal (B)	1	①㊱	Wing Under Stay (R)	1
③	Front Bulk Head (R)	1	①⑥	Exhaust Pipe	1	①㊱	Wing Under Stay (L)	1
④	Front Housing	1	①⑥	Valve Shaft	1	①㊱	Hook Pin	2
⑤	M2,6 Pillow Ball (Black)	2	①⑥	O Ring (P-3)	2	①㊱	Strap (S)	2
⑥	M3 Pillow Ball (Silver)	12	①⑥	E Ring (E-2,5)	13			

# PEUGEOT 4

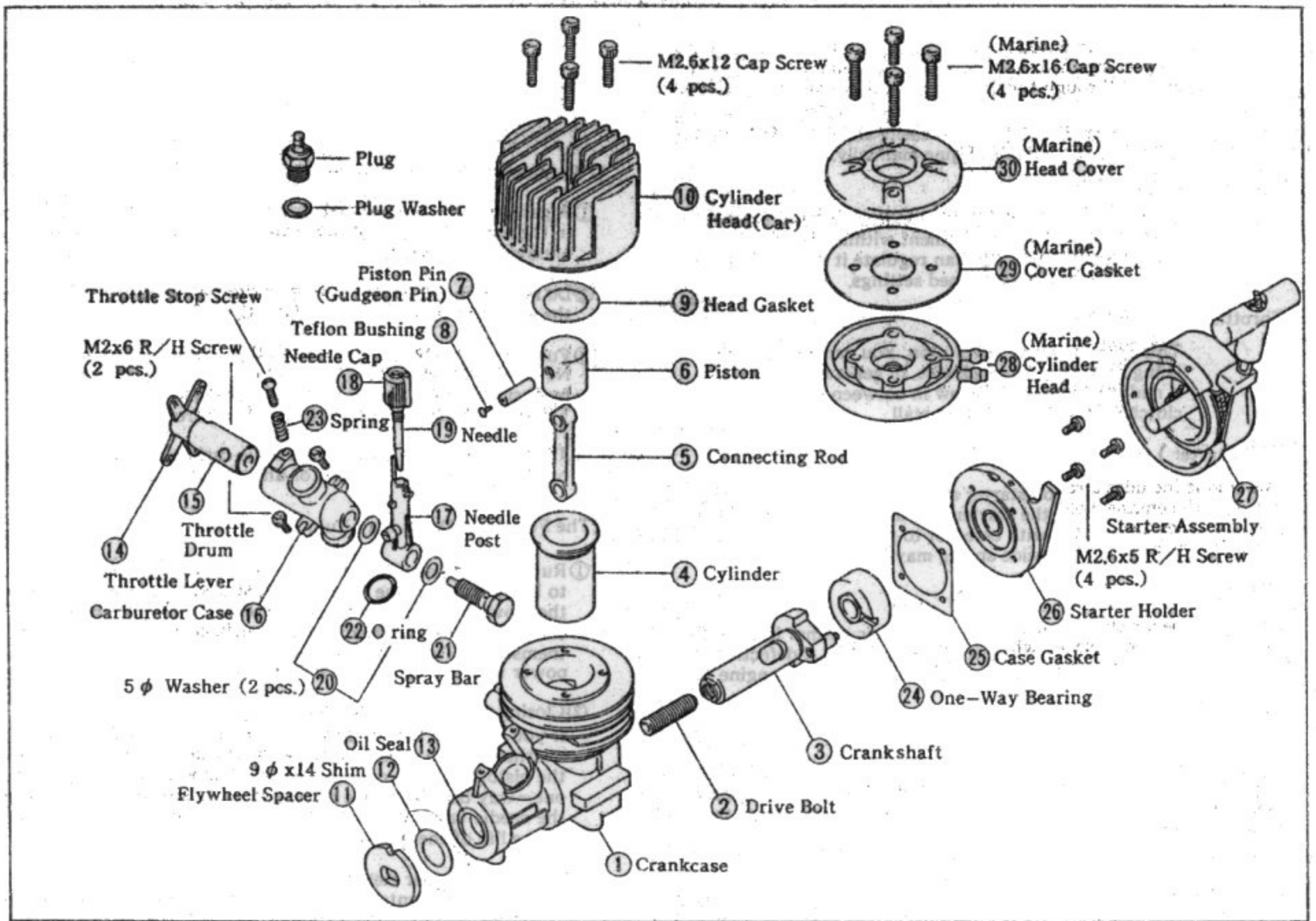


# 405 EXPLODED VIEW

KYOSHO







## OPERATION INSTRUCTION FOR KYOSHO GS-11 CR ENGINE

Kyosho has developed and produced this engine for .10 class modelcars. It features a high performance satisfying from beginners to adepts. It is recommended to read through this instruction beforehand so that you can make the most of the features of the engine; a large cooling head, very efficient in radiating the heat and an easily adjustable carburetor, and a recoil starter easy to start the engine manually.

### 《 Adjustment of Carburetor 》

**Needle** ..... This adjusts the amount of fuel flow. It has a ratchet stopper to limit the adjustment within one round, in the range of which you can regulate it from break-in running to the fastest speed settings.

**Throttle Stop Screw** .....

This controls idling revolution. You can increase the idling by turning it clockwise. In general you can set it midway or slightly below in between the points of clutch engaging and engine stall.

### 《 Recoil Starter 》

This engine includes a recoil starter as a standard accessory. When you start the engine, hold the starter grip and jerk it repeatedly (about 4 times a second) with care not to pull it more than a foot, otherwise the rope or the inside spring may break.

### 《 Air Cleaner 》

A sponge type air cleaner filters the air. The air cleaner is expendable and should be replaced when it becomes filthy. A defective air filter will let something like sands or dust enter into the engine and shorten its life.

### 《 Plug 》

The glow plug is a consumable item. If you find its filament blackened or deformed, you should change it with a new plug. You can check a plug by connecting it to a 1.5V battery. If the filament glows red-hot, the plug is in a good condition.

### 《 Starting and Stopping the Engine, Break-In Running 》

It is generally presumed that it is very hard for a beginner to start a model engine. Once you have got the knack, however, it is rather easy to achieve this. A novice should look to a skilled modeler for guidance how to handle the engine properly. The GS-11CR is designed to start without a hitch. You should break-in your engine by opening the needle valve all the way and running it with a few tanks of fuel. Without it you will have your engine liable to overheating, with a brief span of life, resulting in that the engine will be turned in a poor working condition.

### 《 Warnings when Operating the GS-11CR Engine 》

- ① A gas-powered engine makes a noise. Do not run a model early in the morning or late in the evening, or in anyplace where it annoys other people.
- ② Do not touch the engine during or right after an operation, since the engine heats up to about 200° C.
- ③ Fuel for glow engines contains methyl alcohol which is poisonous. Never drink it or let it in your mouth. If you have it in your eye by accident, see a doctor as soon as possible. The fuel is flammable, keep it out of children's reach.
- ④ The exhaust gas is loaded with toxic carbon monoxide. Do not operate an engine in a room or any place poorly ventilated.

### 《 The Following Deeds May Ruin Your Engine 》

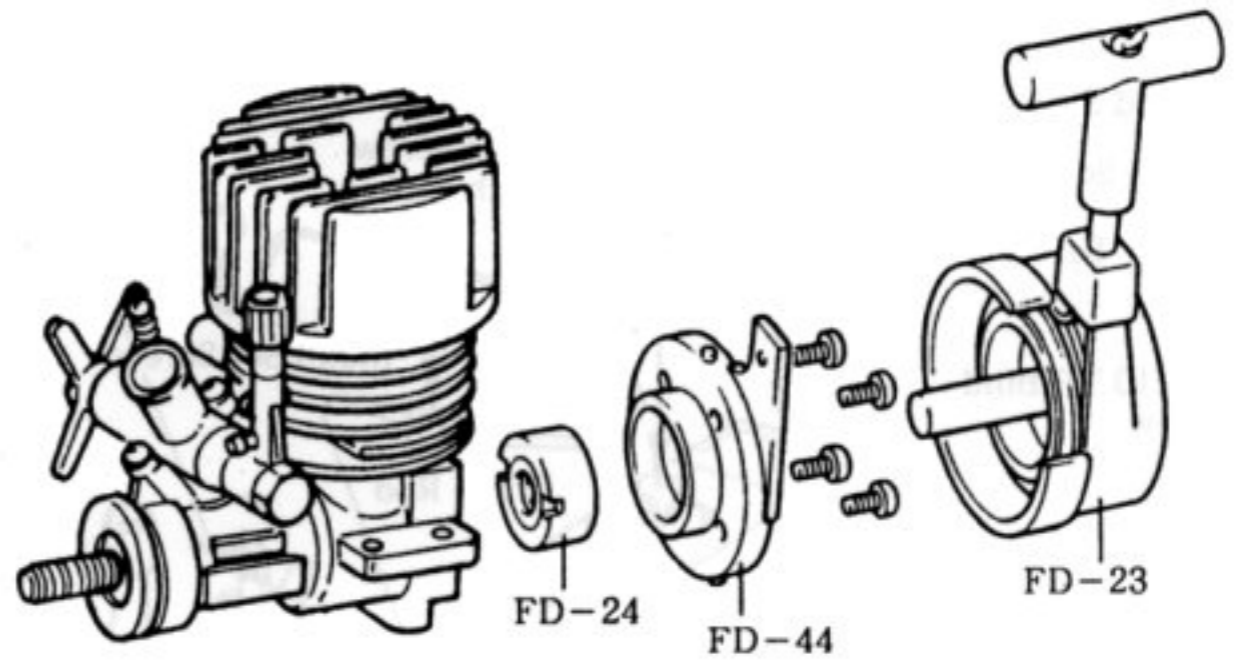
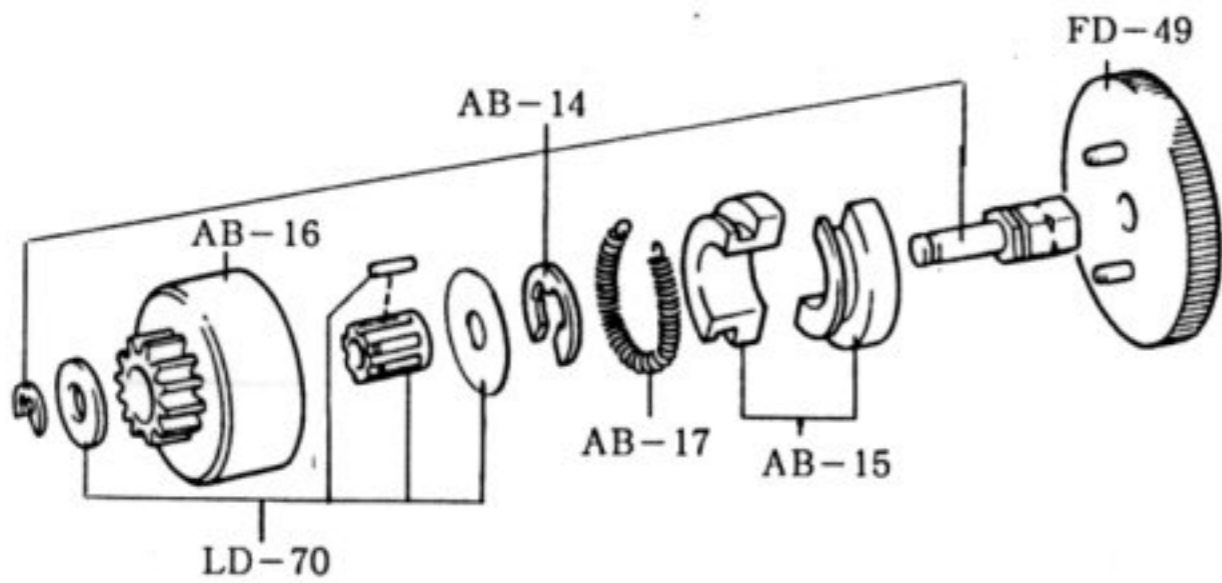
- ① Run your engine without break-in running. It is very important to break in an engine before the first actual operation. It allows the moving parts, such as the piston and cylinder, crankshaft, connecting rod, and bearing, to wear in each other and to seat themselves. Thus the engine will be able to produce the maximum power that it is capable of delivering.
- ② Closing the needle valve excessively.  
If you screw in the needle valve too much, the engine is prone to overheating, an excessive degree of which may lead to seizure of the piston with the cylinder, or high temperature may bind the one-way bearing of the recoil starter. It is recommended to keep the needle valve setting slightly toward rich mixture for the sake of the life of the engine.
- ③ Removing the air cleaner.  
Sands, or dusts entered into an engine will shorten the longevity of the engine. Fix the air cleaner firmly in the position so that it will not come off. (For the same reason, be careful when the tank not to let any foreign particles mixed in the fuel.)
- ④ Running the engine with no load.  
If you run your model car with the four wheels off the ground at a high speed, the engine might rotate too fast resulting in a damage on such a component as the connecting rod.

### SPARE PARTS LIST

NO.	Name of Package	Key Number & Q'ty	NO.	Name of Package	Key Number & Q'ty
6510-01	Carburetor Case	16, 22	6510-15	Screw Set	
6510-02	Throttle Drum	14, 15		M 2x6 R/H Screw x2	Throttle Stop Screw
6510-03	Needle Set	17, 18, 19, 21		M2.6x5 R/H Screw x4	23
6510-04	Crankshaft	2, 3		M2.6x12 Cap Screw x4	Valve Rod
6510-05	Flywheel Spacer	11, 112		M2.6x15 Cap Screw x4	
6510-06	Oil Seal	13	FD23	Starter Assembly	27
6510-07	Crankcase	1	FD24	One-Way Assembly	24
6510-08	Cylinder Head (Car)	10	FD25	Muffler Assembly	
6510-09	Cylinder Head (Marine)	28, 29, 30	FD44	Starter Holder	26
6510-10	Head Gasket	9 (3 mmx1, 5 mmx1)			
6510-11	Case Gasket & 5 φ Washer	20x2, 25			
6510-12	Piston & Cylinder Set	4, 6			
6510-13	Piston Pin (Gudgeon Pin)	7, 8			
6510-14	Connecting Rod	5			

Kyosho GS-11CR engine is mounted on the chassis of this model. Instruction manual is not for GS-11CR engine, so there are some differences in the instructions included in this kit. Please read this supplemental instruction manual carefully before assembly.

《 GS-11CR ENGINE 》

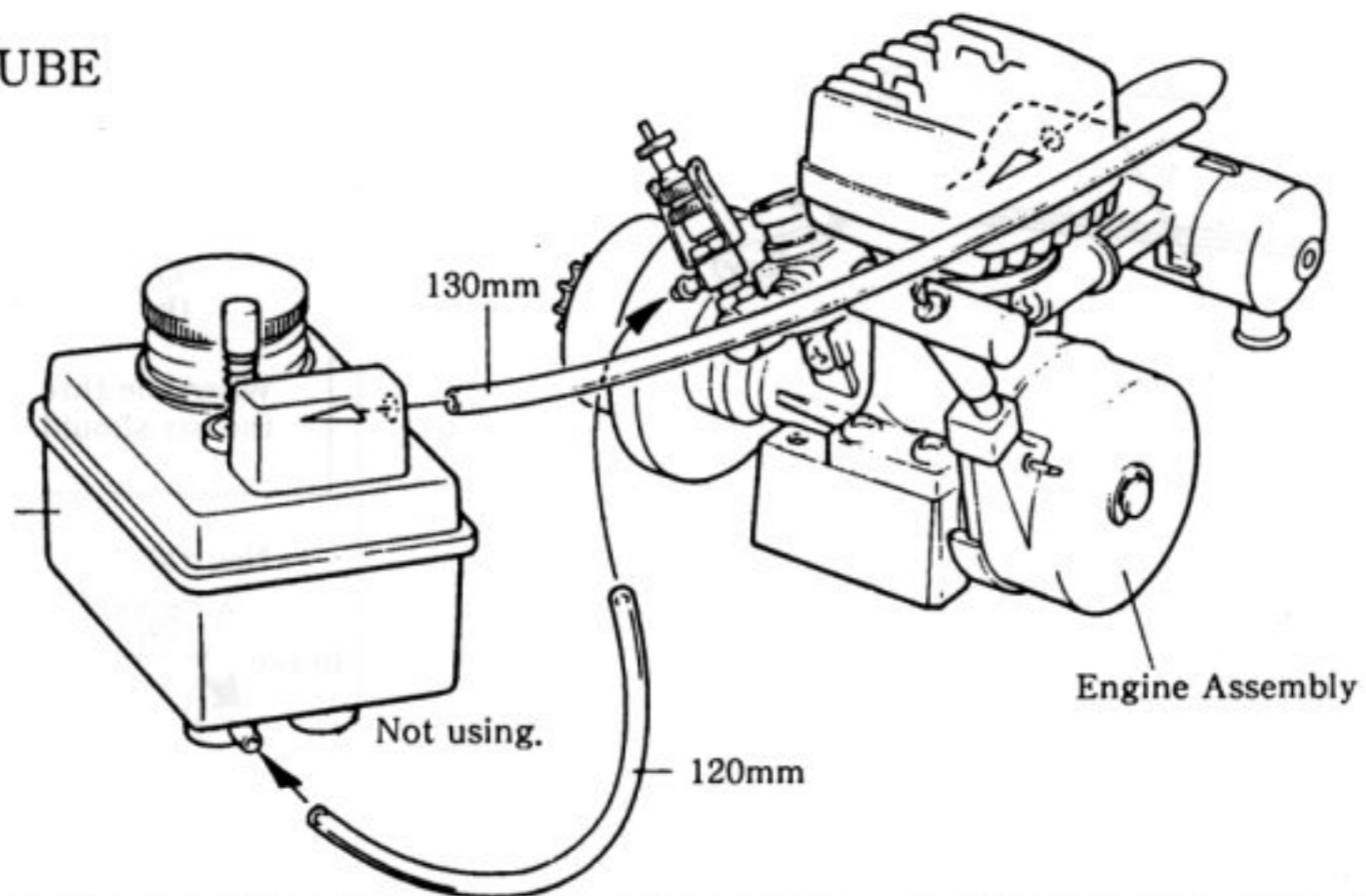


INSTALLATION OF FUEL TUBE



Cut the fuel tubing to the lengths shown below.

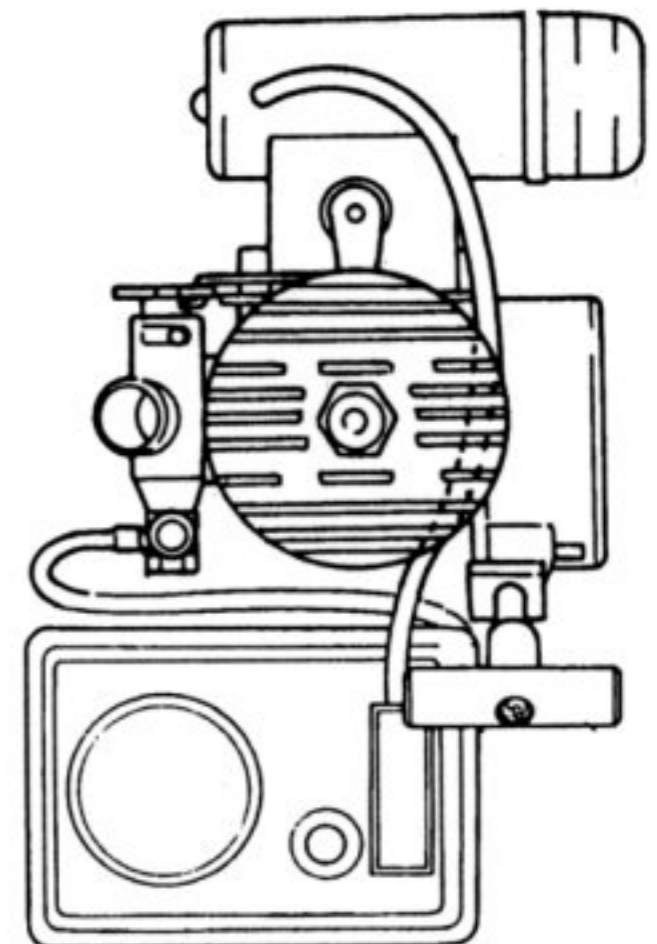
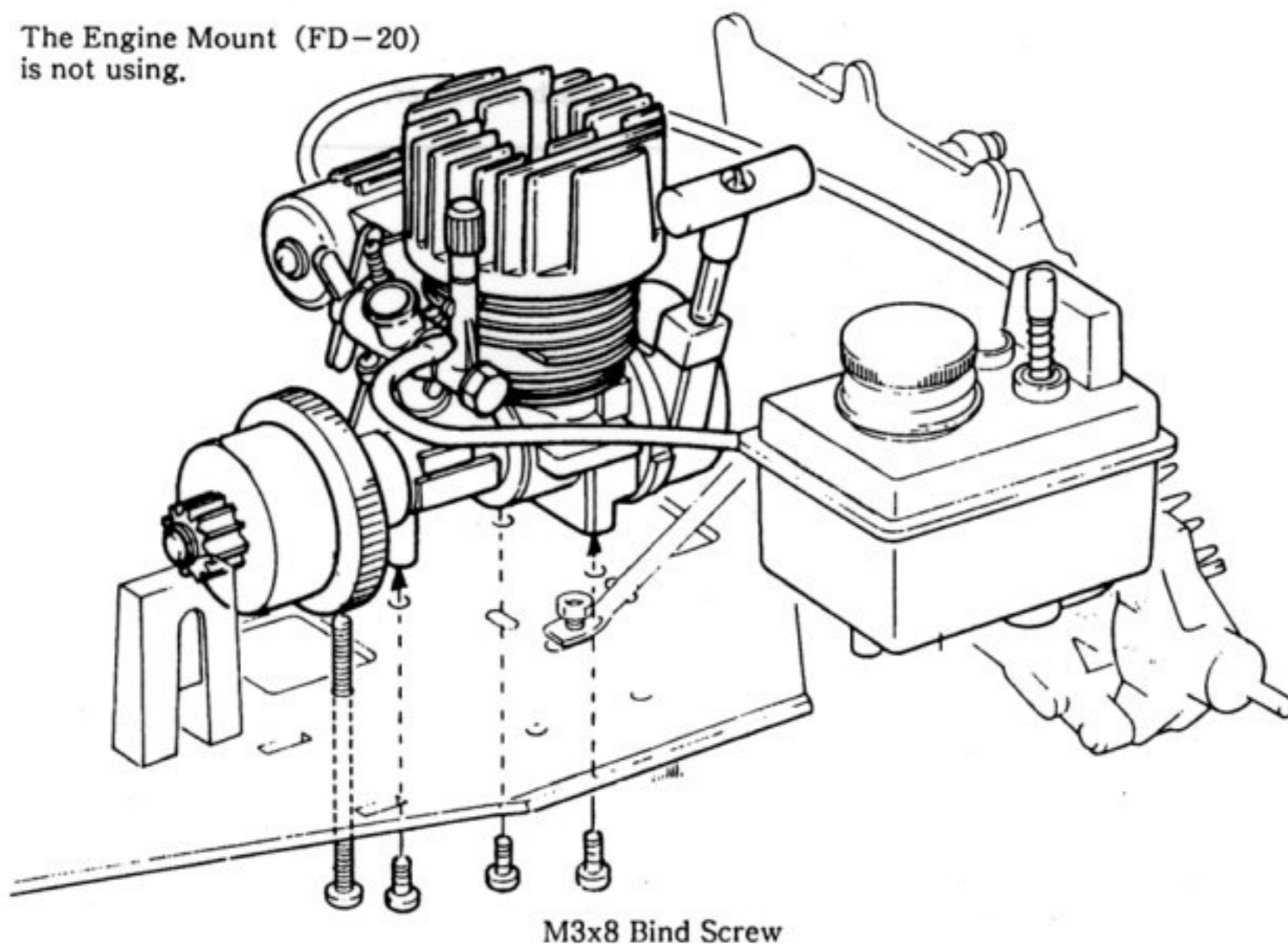
- Fuel Tank to Needle ... 120 mm
- Fuel Tank to Muffler ... 130 mm



MOUNTING ENGINE

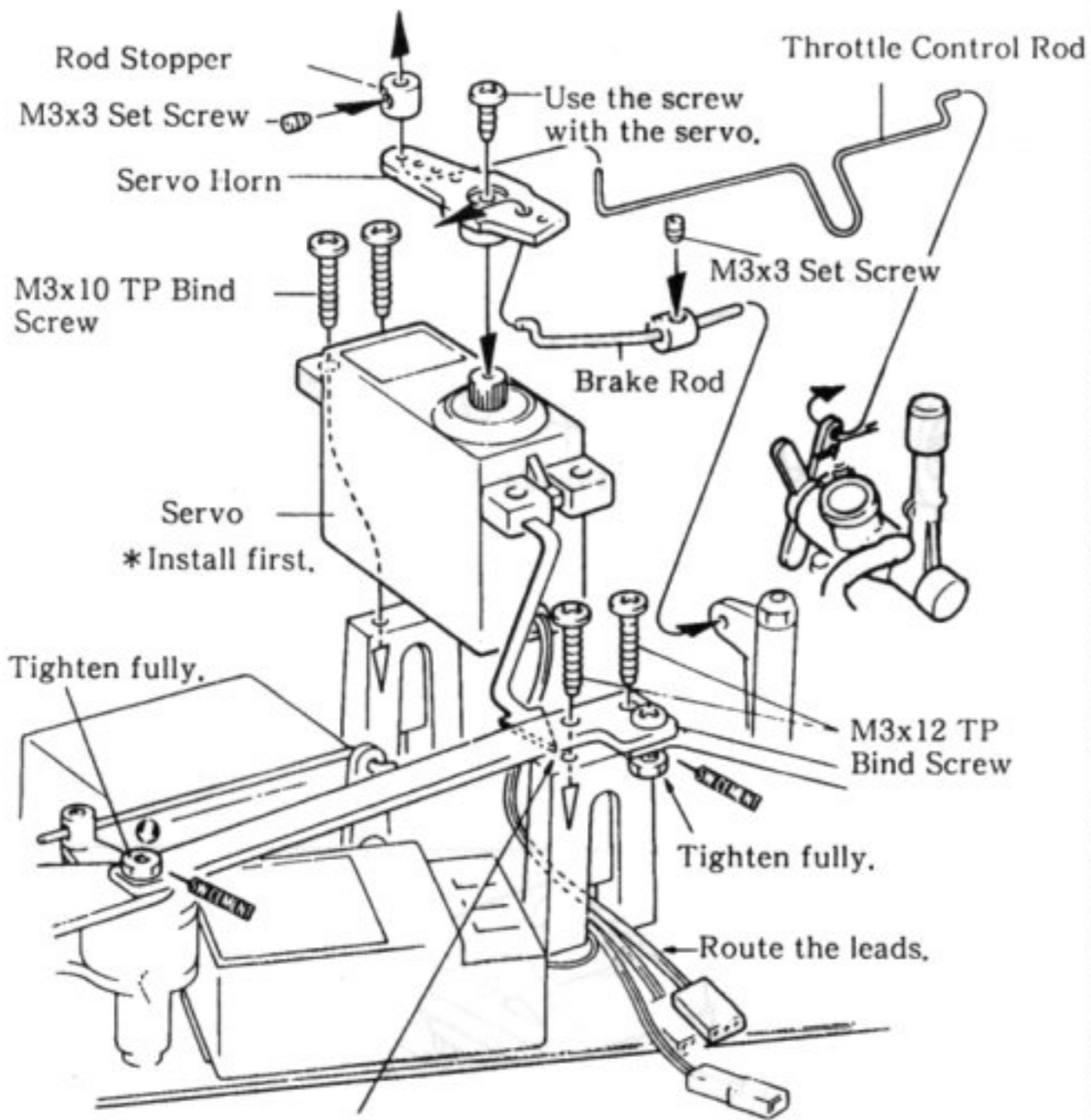
The Engine Mount (FD-20) is not using.

Route the fuel lines as shown below.

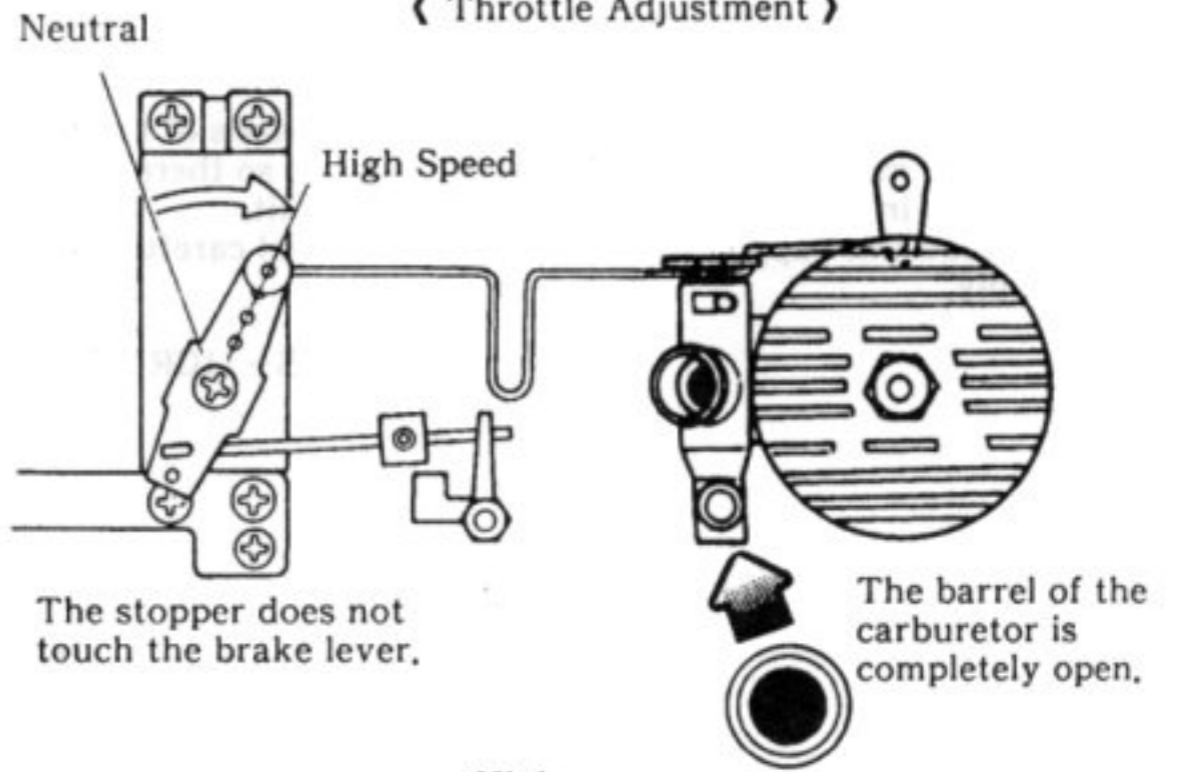


《 Top View 》

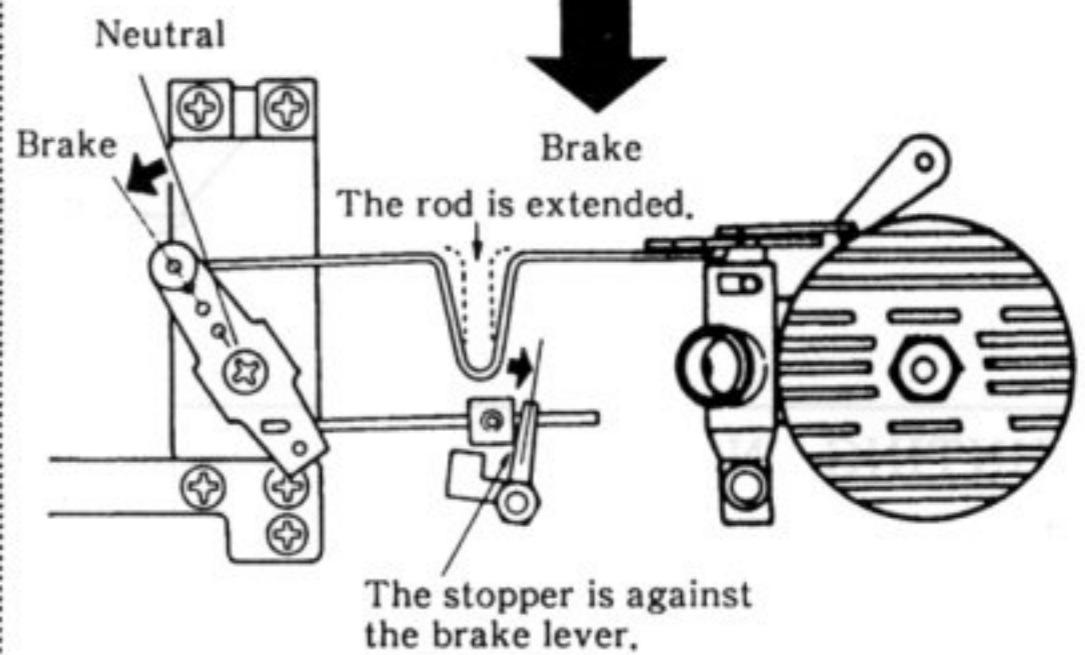
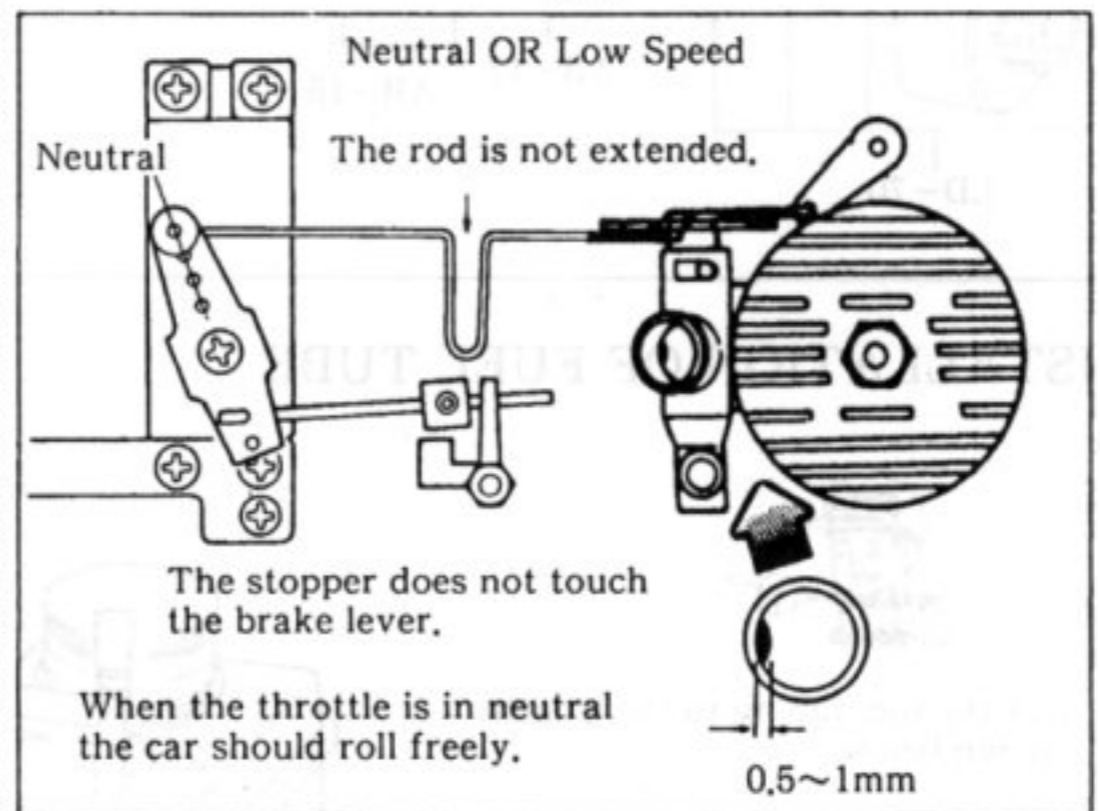
# ENGINE CONTROL LINKAGE



## 《 Throttle Adjustment 》



High



GP



PLEASE FOLLOW THESE PRECAUTIONS.

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



1 Operate your model in a clear area.



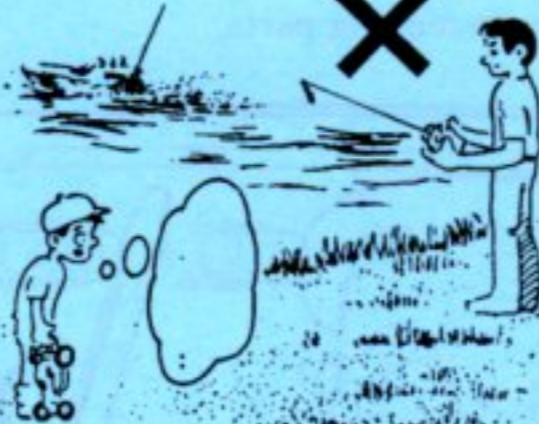
Away from buildings



Away from other people.



No other R/C models  
on your frequency.



Away from roads and  
railway tracks.

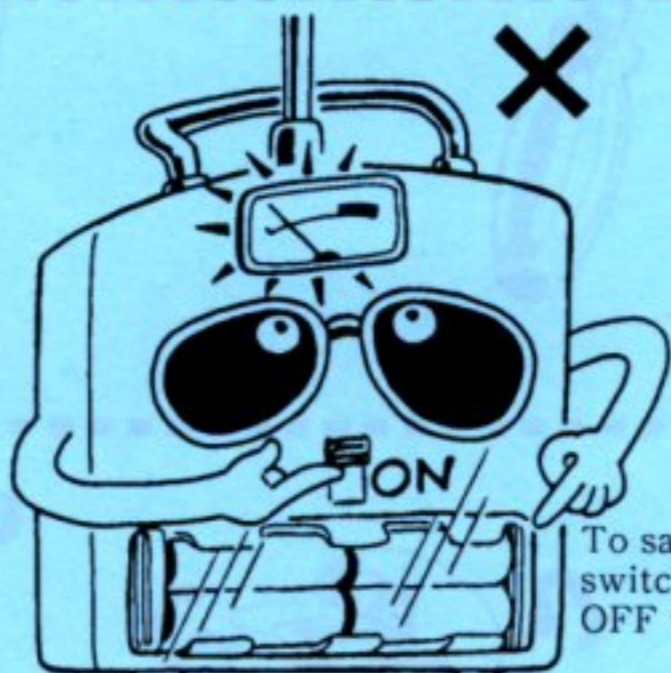
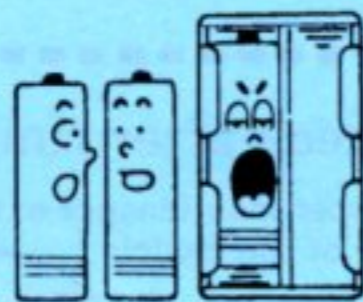


2 Check before running



Battery Checker

Charge radio batteries fully  
(if rechargeable type).

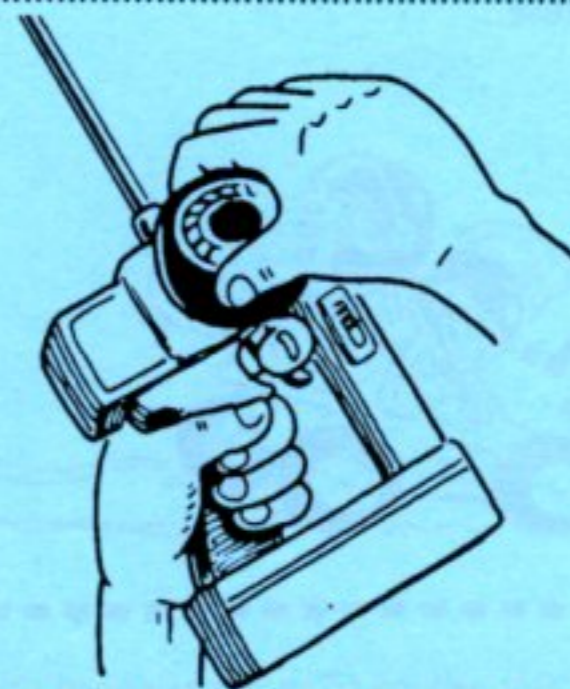
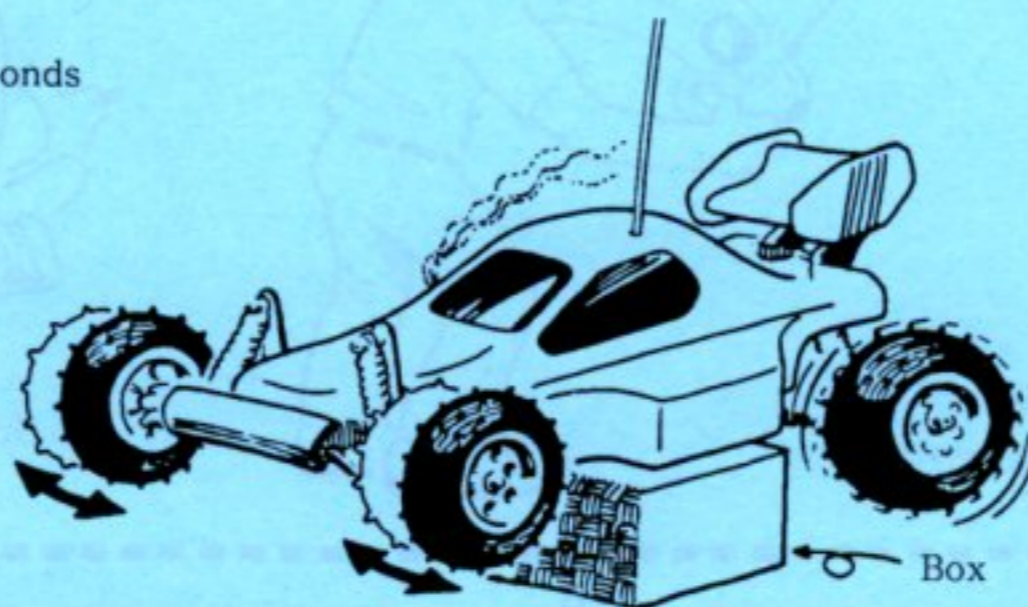


To save battery power,  
switch radio equipment  
OFF when not being used.

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



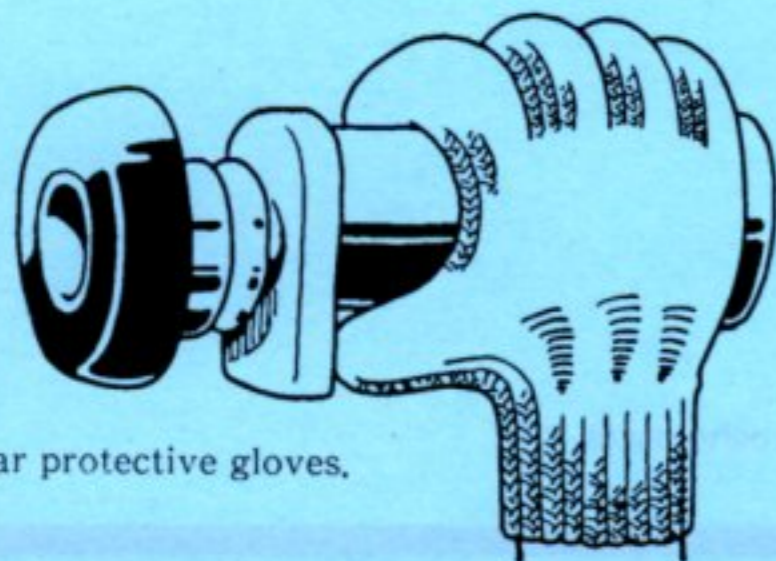
Make sure that the model responds  
correctly to the transmitter.



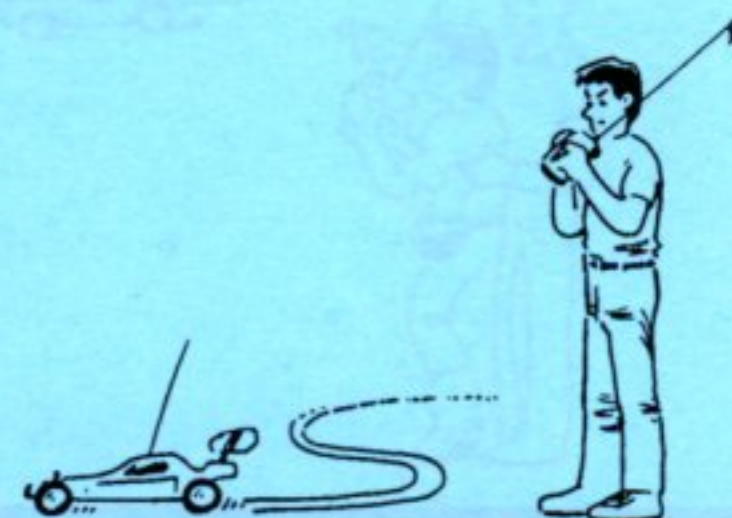
3 Starting the Engine

Engine will be very hot after running.

For longer engine life,  
break it in as instructed.

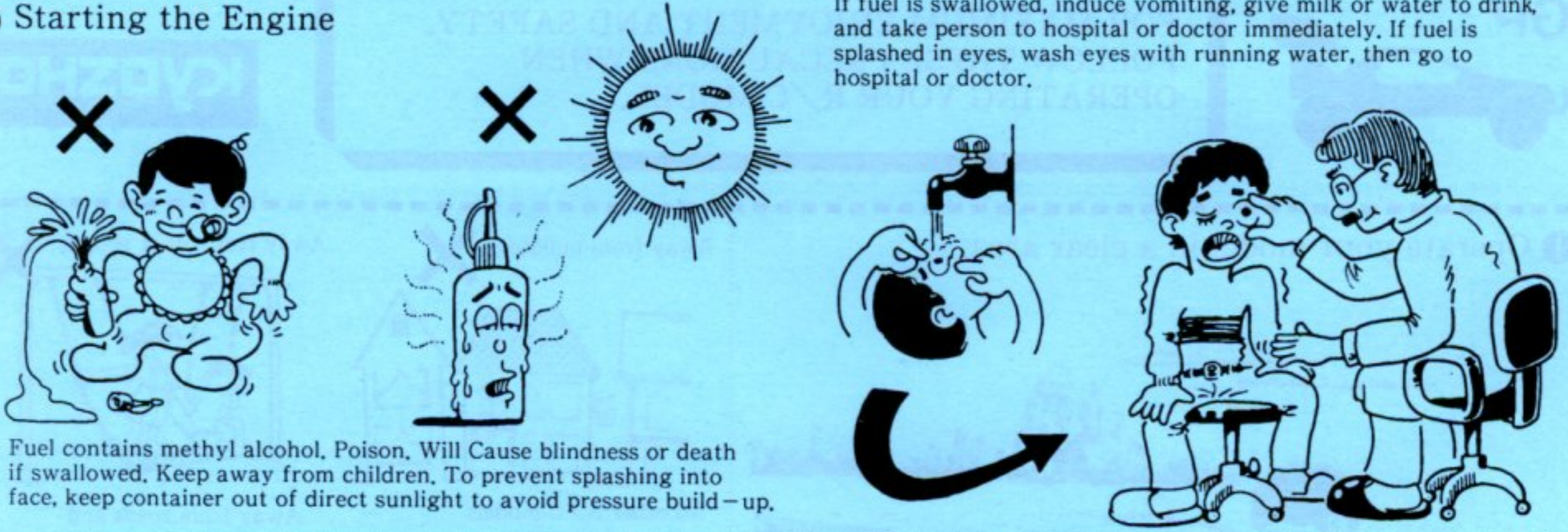


Wear protective gloves.



### 3 Starting the Engine

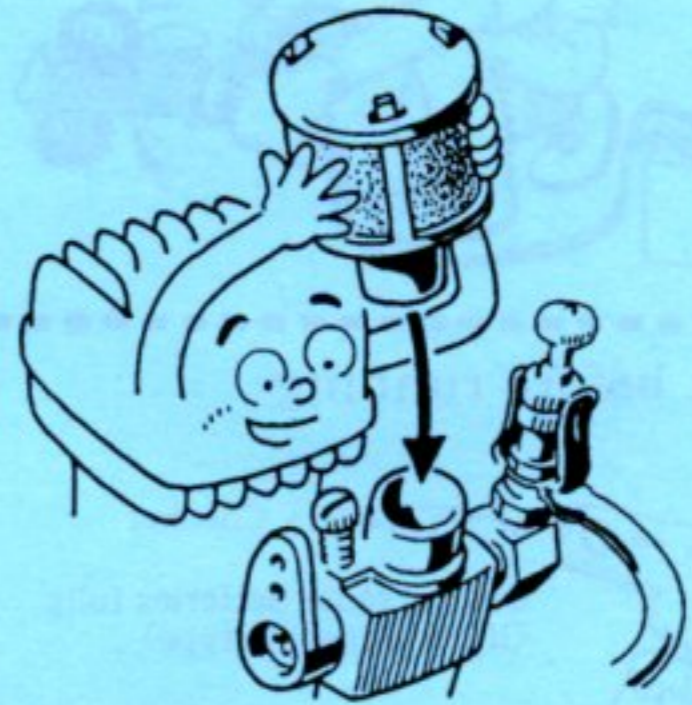
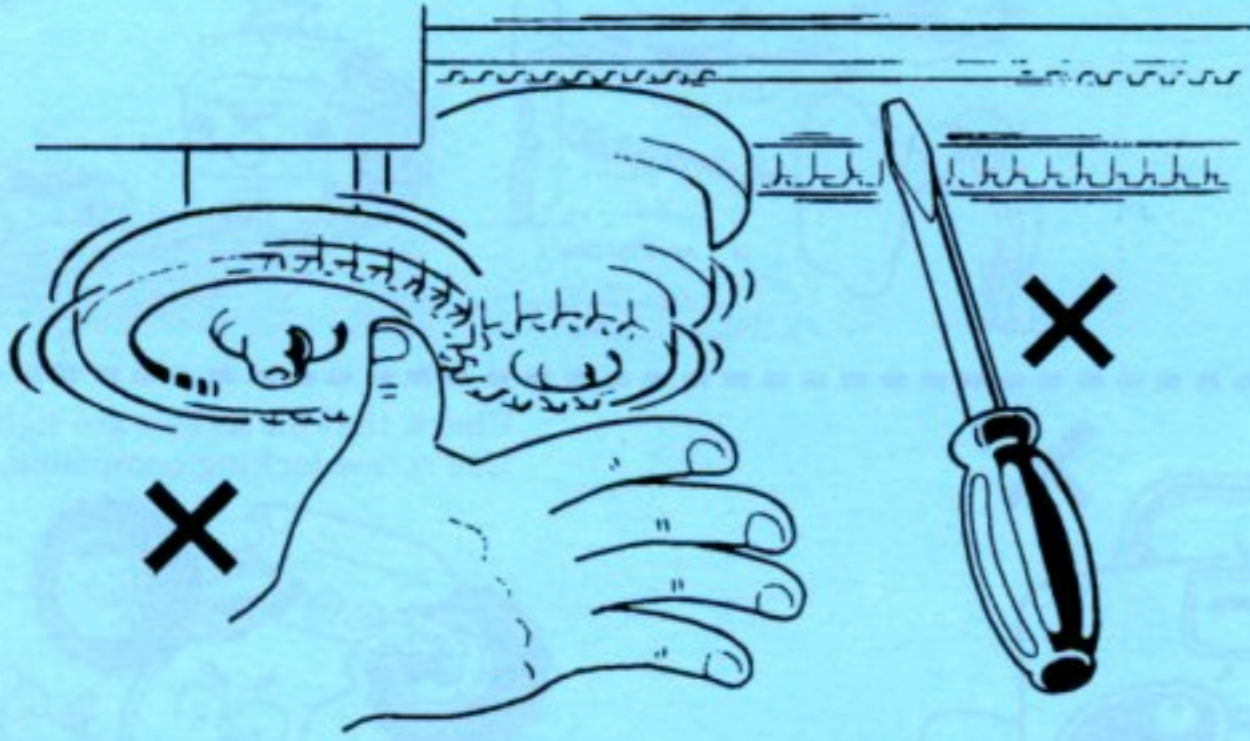
If fuel is swallowed, induce vomiting, give milk or water to drink, and take person to hospital or doctor immediately. If fuel is splashed in eyes, wash eyes with running water, then go to hospital or doctor.



Fuel contains methyl alcohol. Poison. Will Cause blindness or death if swallowed. Keep away from children. To prevent splashing into face, keep container out of direct sunlight to avoid pressure build-up.

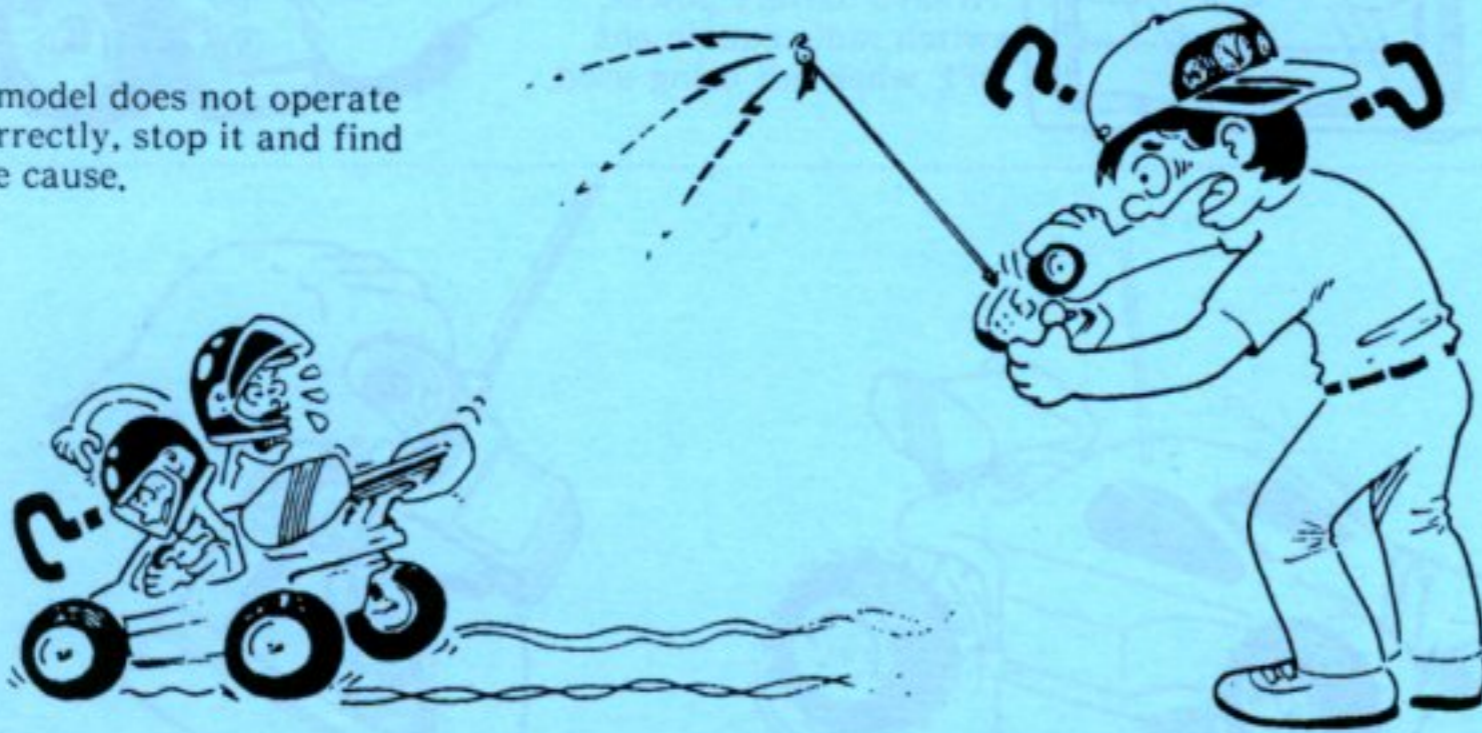
Keep hands and tools away from moving parts.

Always use an air cleaner when engine is running.



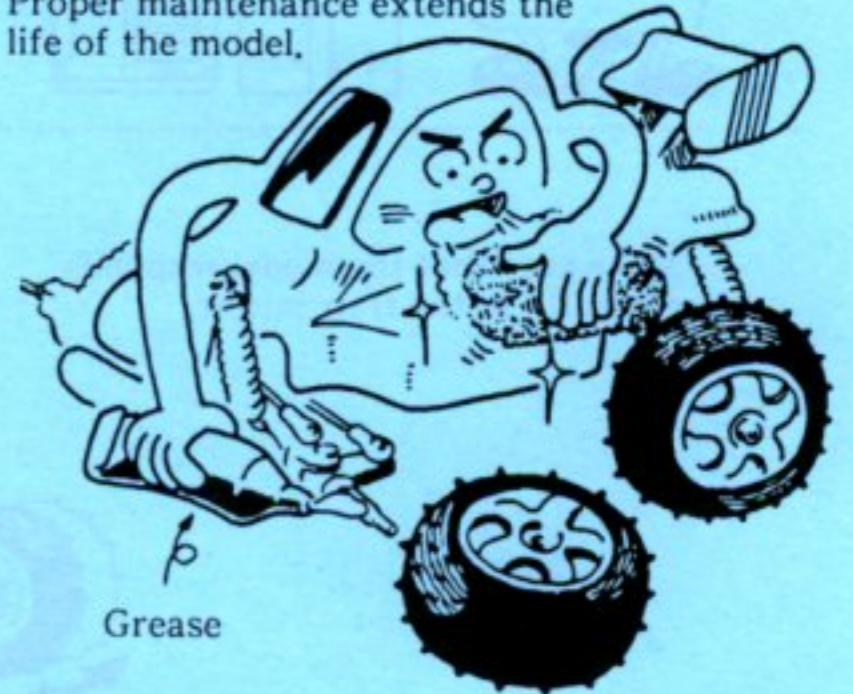
### 4 Running Safety

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

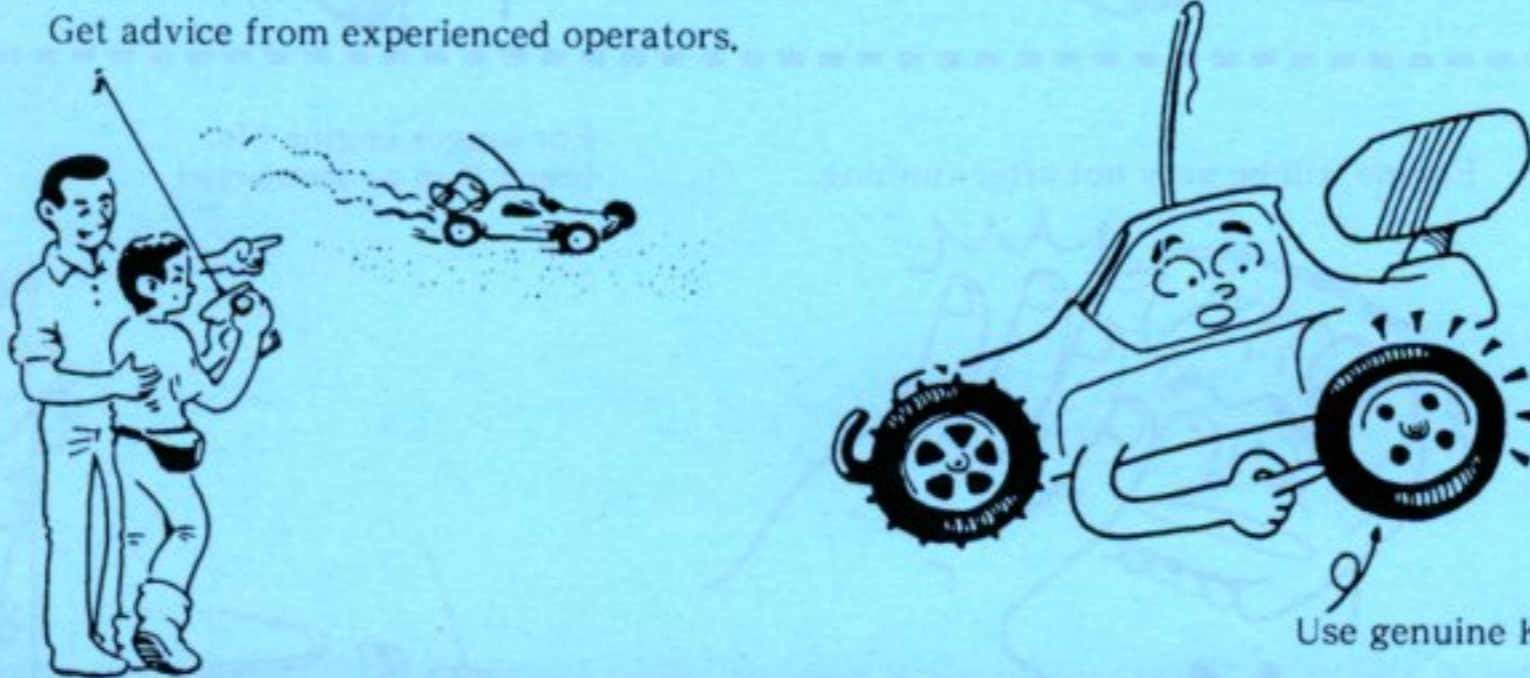


### 5 Check after running

Proper maintenance extends the life of the model.

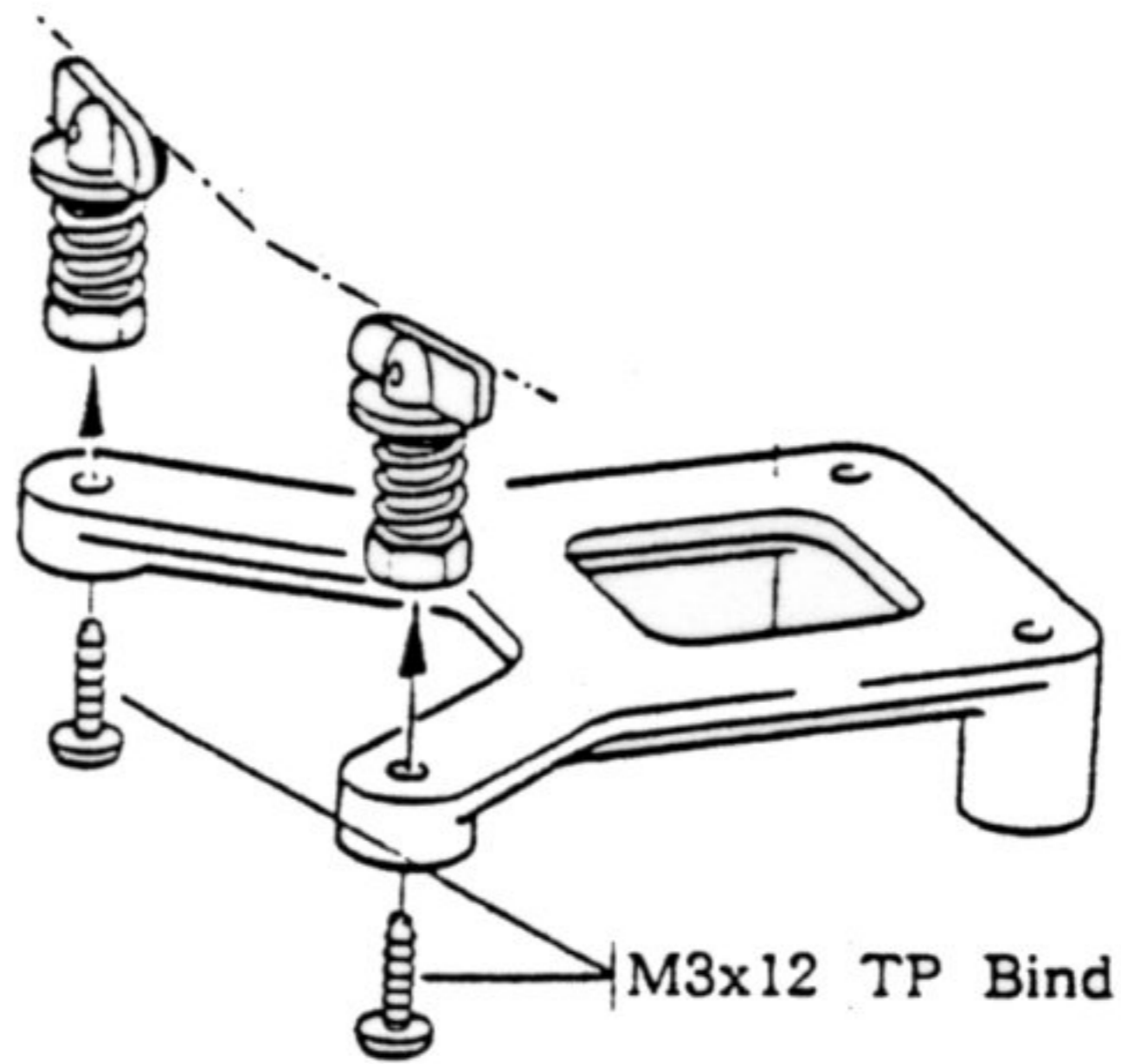


### 6 Get advice from experienced operators.

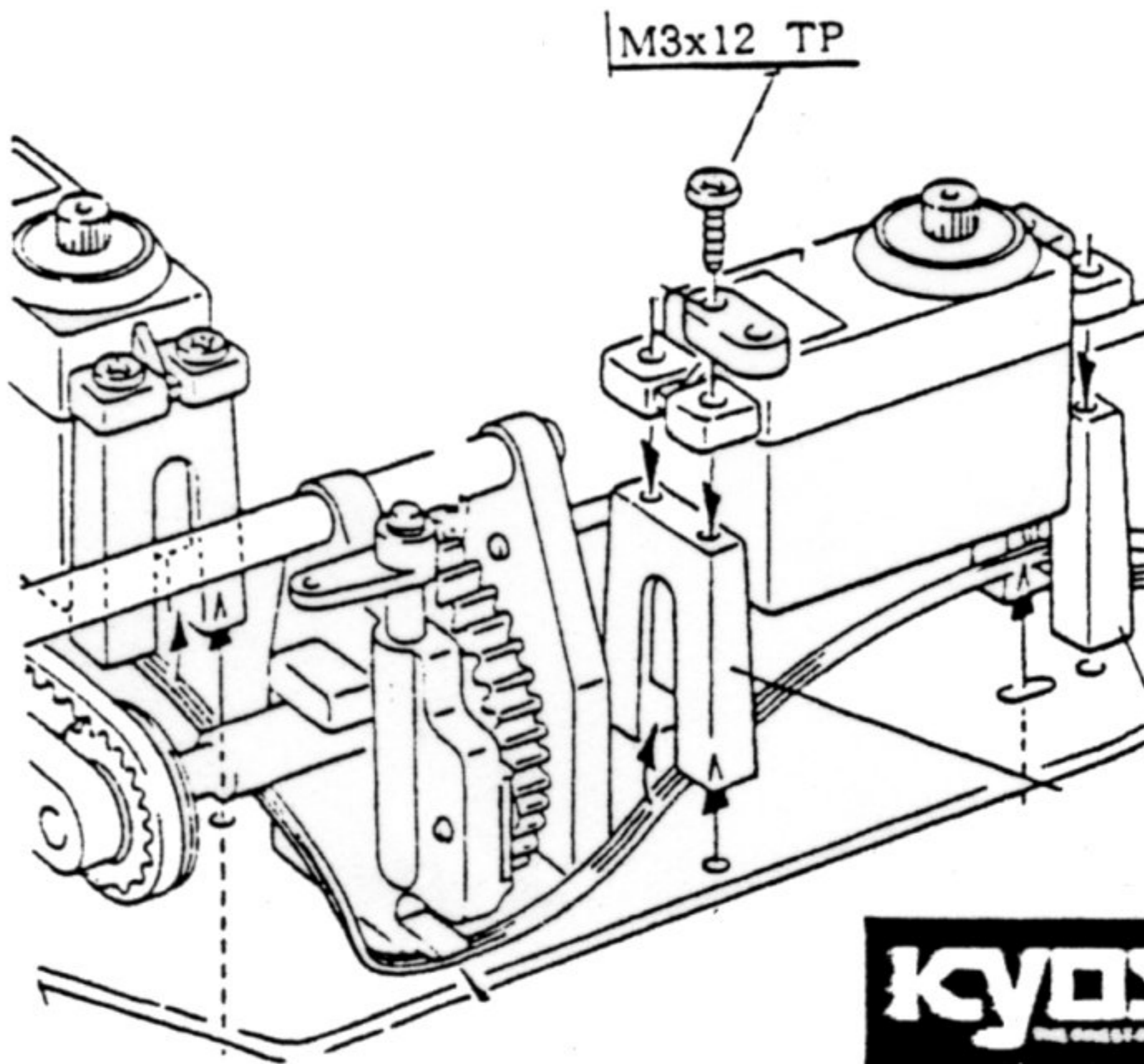


Use genuine Kyosho parts.

Stage 2



FRSP-9



**KYOSHO**  
THE BEST AND CHEAPEST