

RADIO CONTROLLED ELECTRIC POWERED RACING BUGGY

OFF-ROAD RACER

TURBO ULTIMA™

RADIO CONTROLLED ELECTRIC POWERED RACING BUGGY

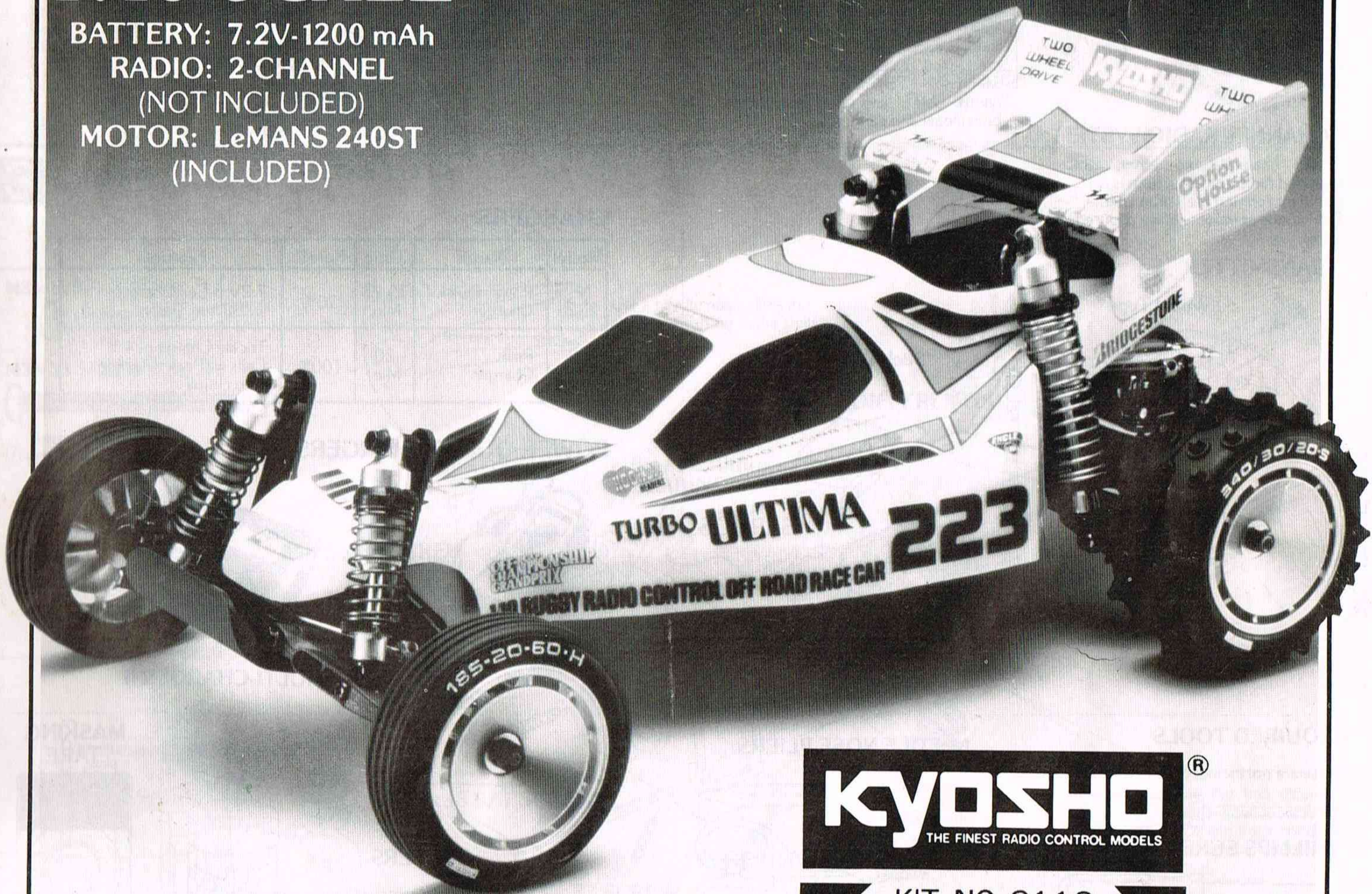
- THE HIGHEST PERFORMANCE 2WD BUGGY ON THE TRACK.
- SUPER LIGHTWEIGHT FOR QUICK ACCELERATION.
- LONG-TRAVEL SUSPENSION FOR EXCELLENT HANDLING ON ANY SURFACE.
- INDEPENDENT SUSPENSION ON ALL FOUR WHEELS WITH PLATINUM OIL-FILLED SHOCK ABSORBERS AND STABILIZER BARS.
- DOUBLE WISHBONE SUSPENSION DESIGN FOR OPTIMUM WHEEL POSITIONING.
- RACE-TESTED GEOMETRY.
- BALL DIFFERENTIAL FOR OPTIMUM POWER DISTRIBUTION.
- RIGID, LIGHT ALUMINUM-ALLOY CHASSIS.
- POWERFUL LeMANS 240ST MOTOR INCLUDED IN KIT.
- FOURTEEN BALL BEARINGS TO REDUCE FRICTION.

1:10 SCALE

BATTERY: 7.2V-1200 mAh

RADIO: 2-CHANNEL
(NOT INCLUDED)

MOTOR: LeMANS 240ST
(INCLUDED)



KYOSHO®
THE FINEST RADIO CONTROL MODELS

◀ KIT NO. 3116 ▶

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TURBO ULTIMA

Before you begin, carefully read through the manual. This will give you a better understanding of the construction of this model.

○ Certain symbols are used throughout the instructions. Pay attention to their location.

OIL ... Points where Grease/Oil should be applied. (This will reduce wear and friction and provide a smoother operating joint.)

SW-LOCK ... Places where Screw Lock (Zap Lock, etc.) should be applied. (This will prevent screws and nuts from loosening up during operation due to the vibration of the model.)

KYOSHO ... Where you see this face, are steps that you should pay extra particular attention to when building this model.

IMPORTANT! BEFORE YOU BEGIN

This is a sophisticated model with a large number of moving parts. Before you begin assembly, take a look through the box and these instructions carefully to decide whether or not you are ready for this challenge! If you do not feel that this type of model is for you, it may be returned to the dealer as long as it is NEW and UNUSED, UNDER NO CIRCUMSTANCES CAN YOUR DEALER ACCEPT A KIT FOR RETURN IF ASSEMBLY HAS ALREADY BEGUN! If this is not what you bargained for, then go no further and return this kit to the dealer immediately. But, if a little maintenance doesn't bother you and the thrill of high performance driving is for you, then don't hesitate another minute! Read through this entire manual thoroughly to familiarize yourself with the parts and methods of construction used before actually starting to build.

KYOSHO ENTIRE CONTENTS
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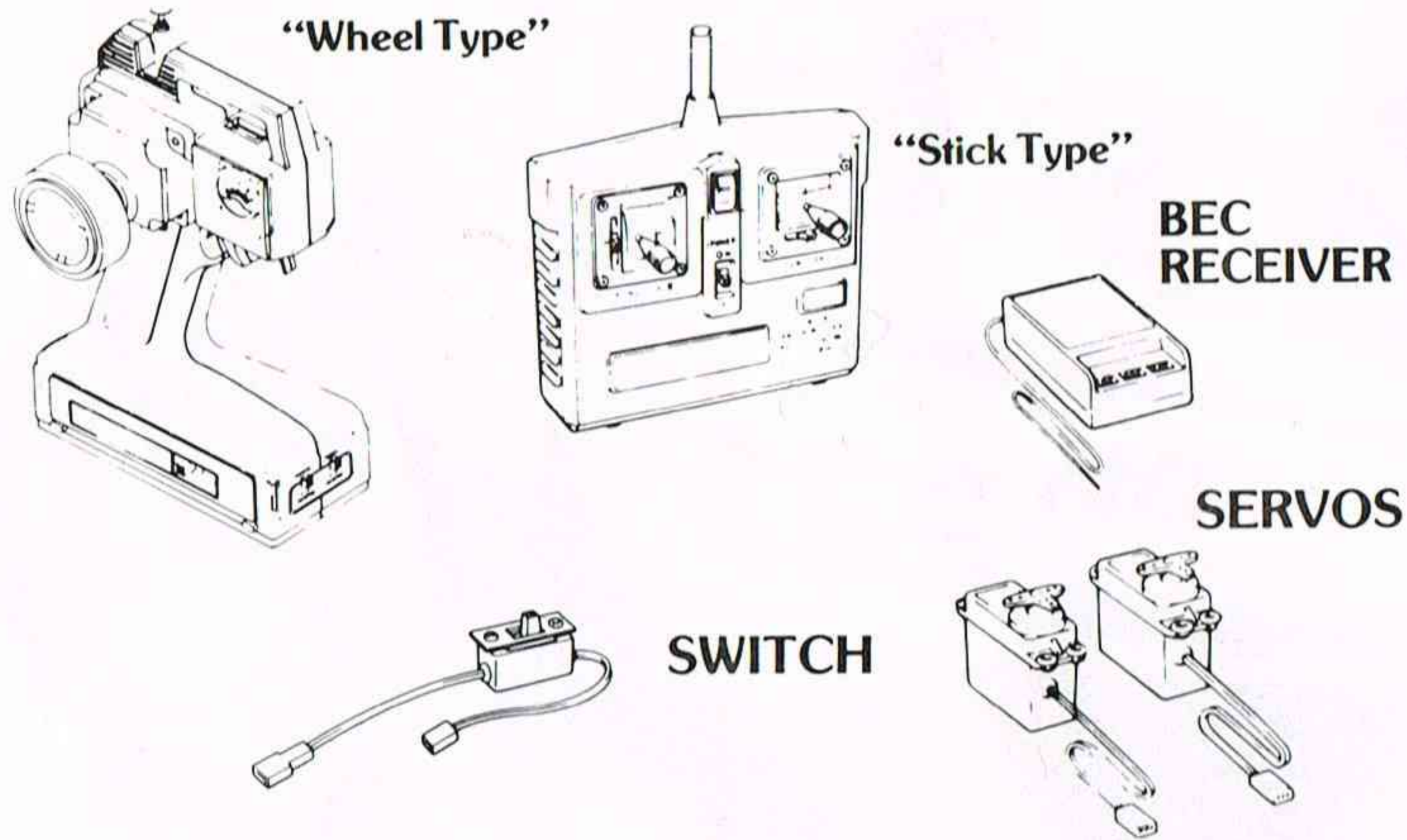


Note: use only radio frequencies specifically allowed to operate "surface" models such as R/C cars and boats. In the United States those frequencies fall within the "75 MHz" or "27 MHz" bands. Use of any other frequencies is both illegal and dangerous.

2 CHANNEL RADIO SYSTEM

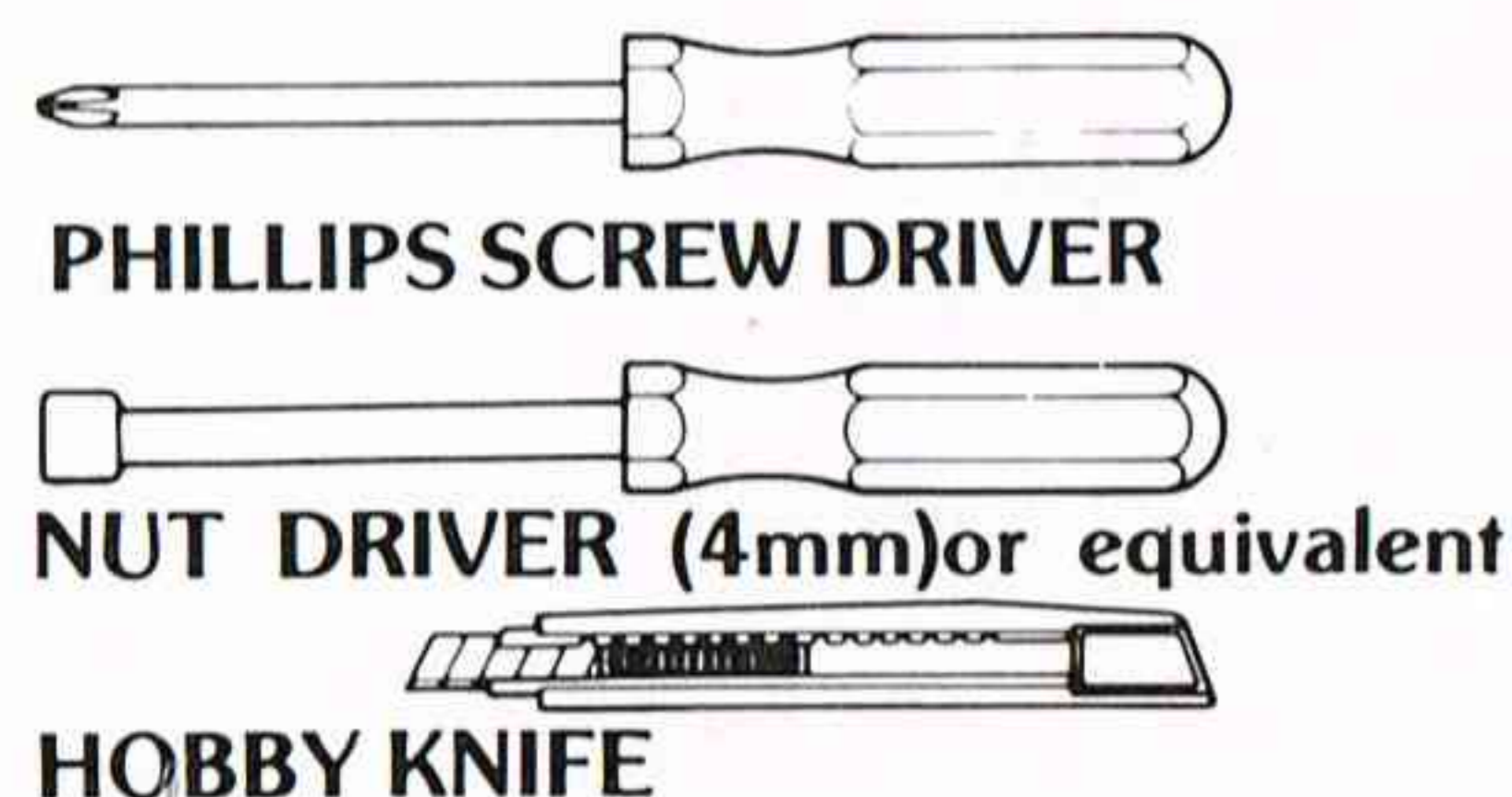
A two channel, two servo, BEC equipped radio control system is required for running the Turbo Ultima. The various components are pictured below.

TRANSMITTER

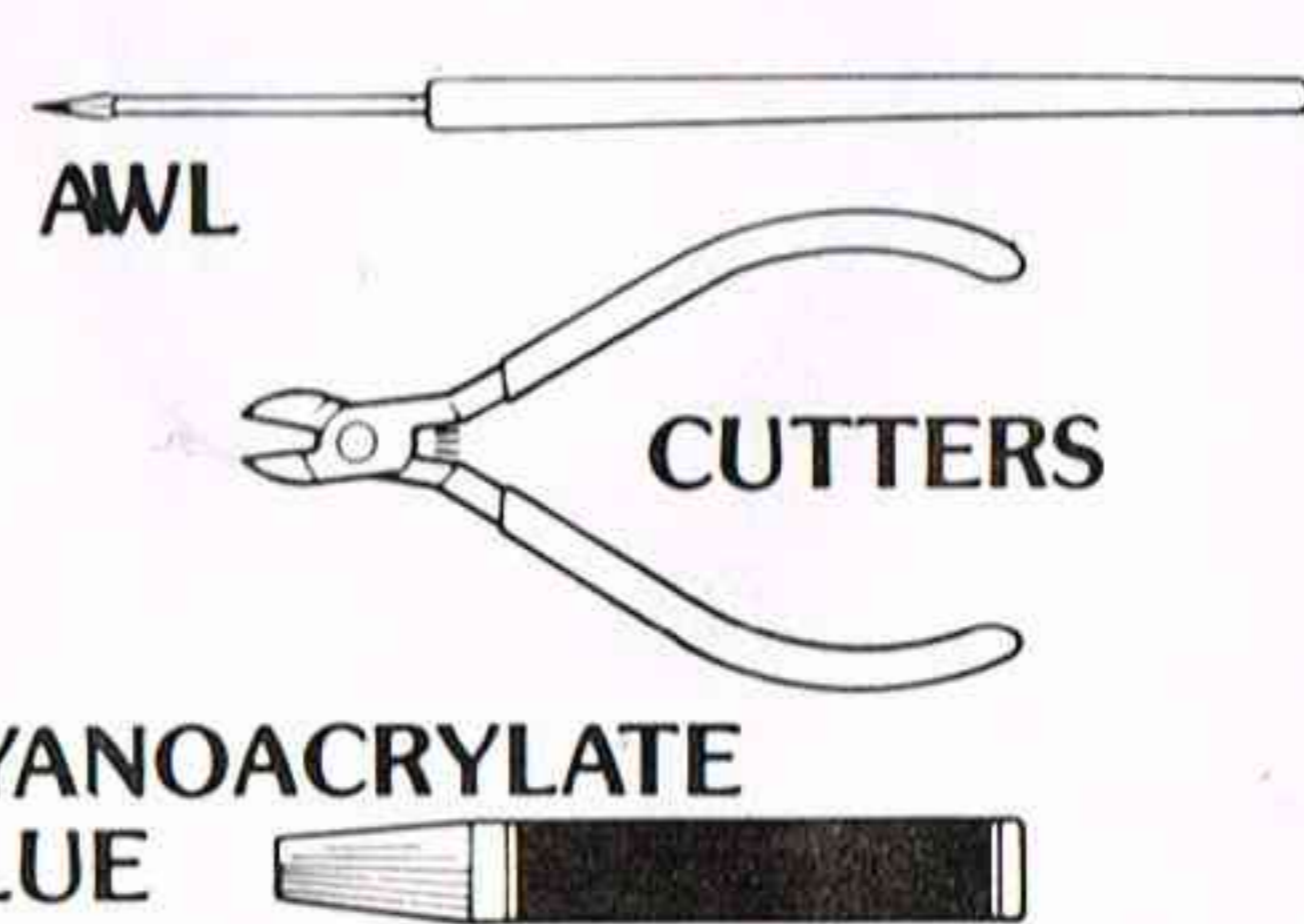
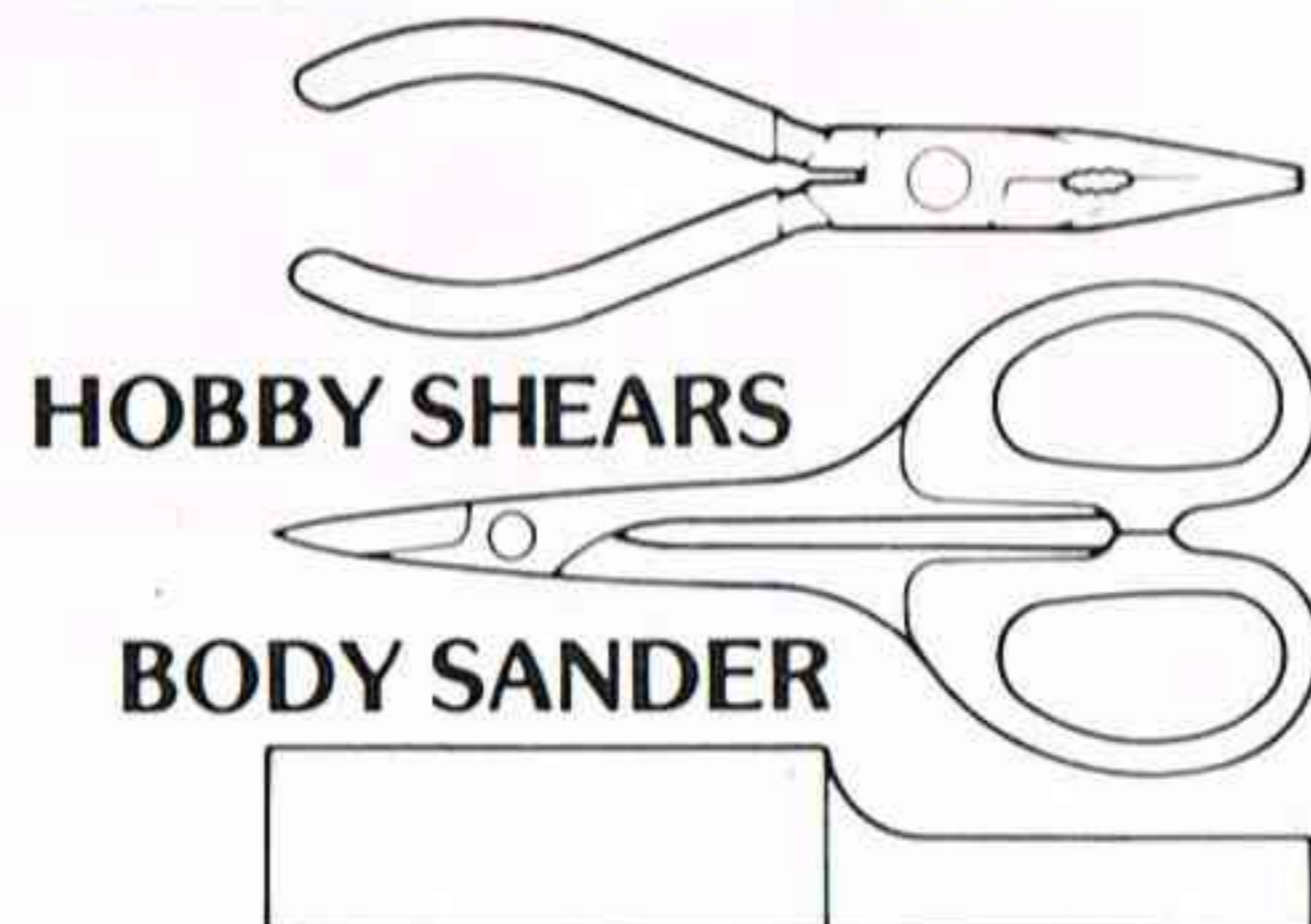


REQUIRED TOOLS

These are not included with the Turbo Ultima.



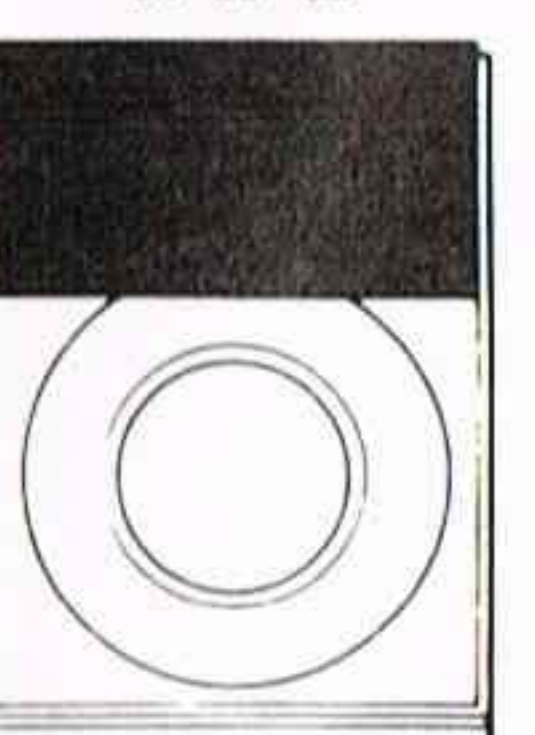
NEEDLE NOSE PLIERS



POLYCA PAINT



MASKING TAPE

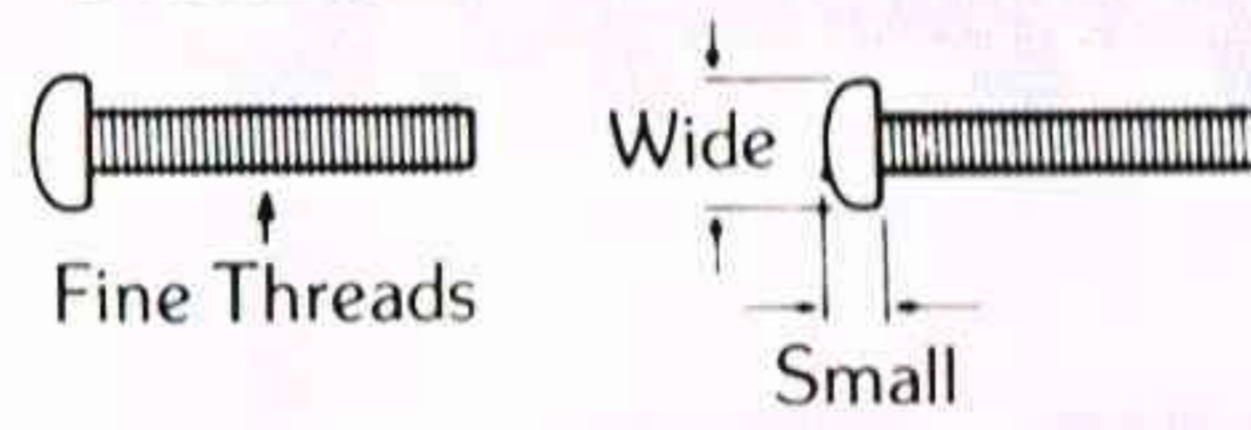


BRUSH



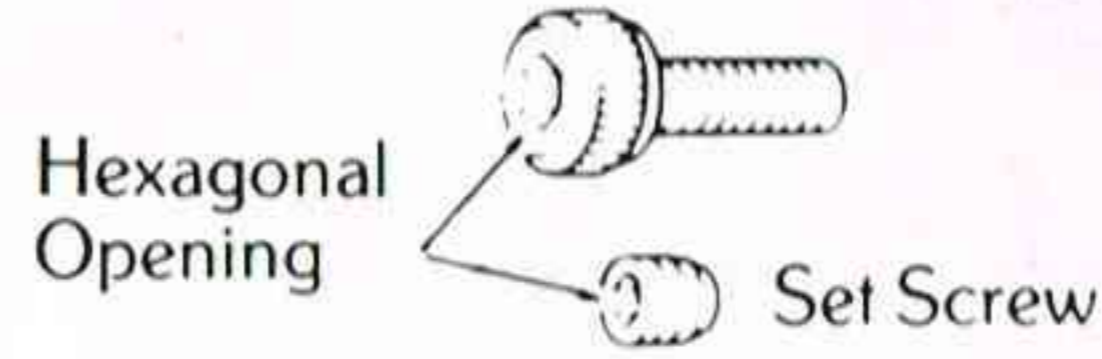
A few different types of screws are used in the construction of your model. Here are some examples of them and how they will be indicated in the instructions. For example, Self Tapping will simply be S/T screw.

SCREW

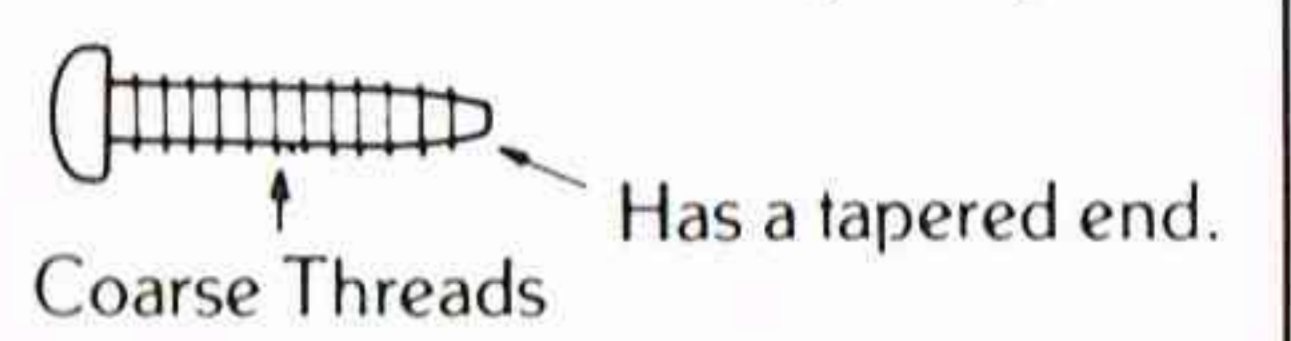


If it is an ordinary screw it will be marked "screw".

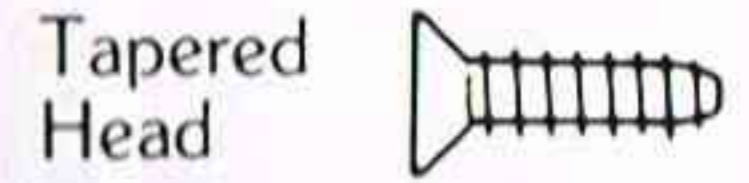
ALLEN HEAD SCREW (A/H)



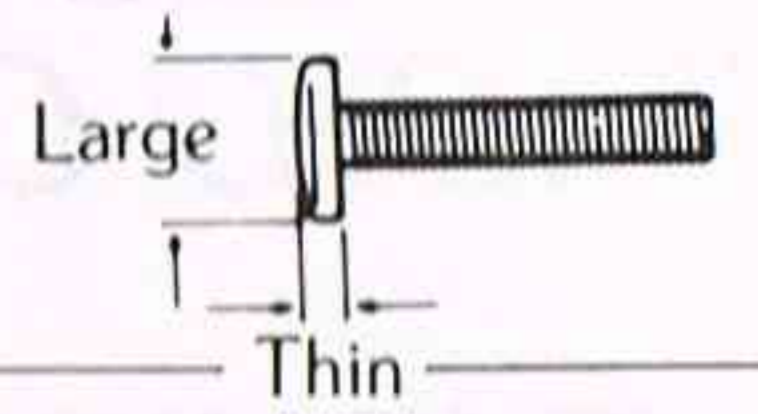
SELF TAPPING (S/T)



FLAT HEAD SCREW (F/H)



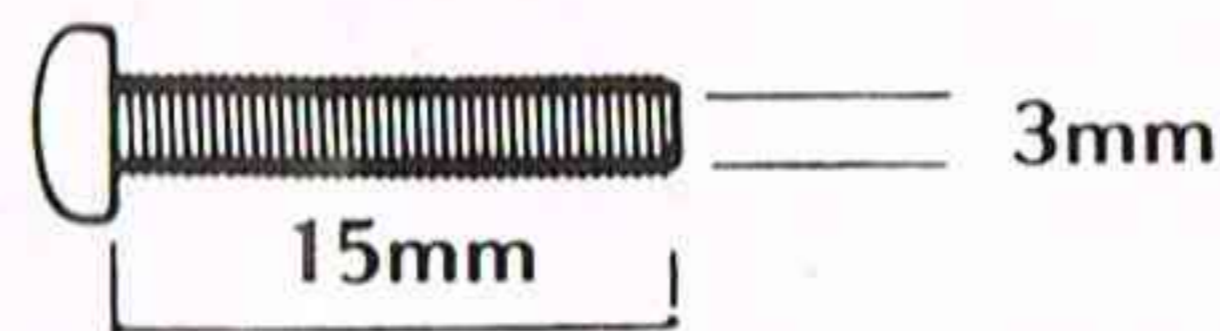
PAN HEAD SCREW (P/H)



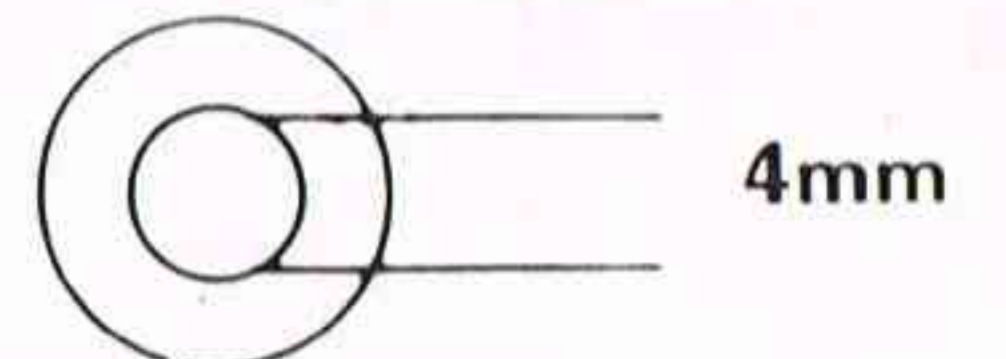
METRIC NUTS AND BOLTS

All nuts and bolts used throughout this kit are metric size. Therefore, some of the notations may not be familiar to you. An M3 nut is a 3 millimeter (3mm) nut. An M3 x 15 screw is 15mm long and 3mm in diameter. Some round parts may be

M3x15 SCREW



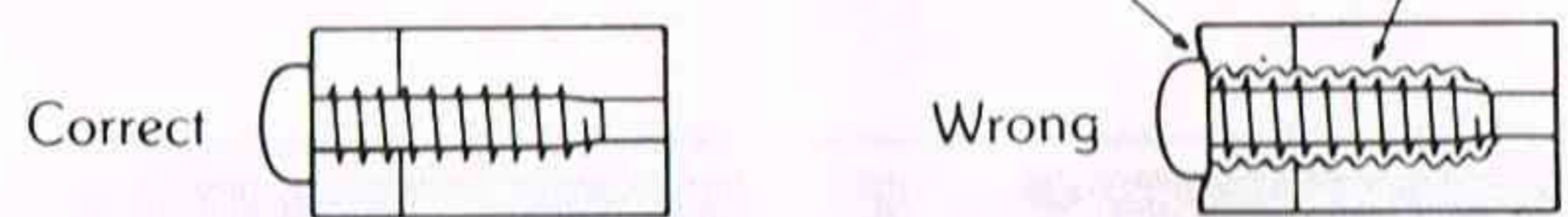
4mm WASHER



labeled as a "4mm Washer" (this should be a washer with a 4mm inside diameter) or a "3mm Bushing" (a bushing with a 3mm inside diameter). At various points throughout the manual these parts are labeled and pictured in their actual size on the left hand side of the page. For your reference, 1 millimeter equals approximately .039 inches.

Use the list of small parts to compare the shapes of the small parts used with each step such as screws, nuts and washers.

Do not use excessive force when tightening S/T type screws into plastic. Overtightening will cause the threaded portion of the plastic to strip. It is recommended to stop tightening when some resistance is felt after the threaded portion enters the plastic.



BATTERY PACK

A 7.2V battery similar in shape to the one shown here is required. The Kyosho #2218, #2306 or #2310 are good choices.



6-CELL BATTERY

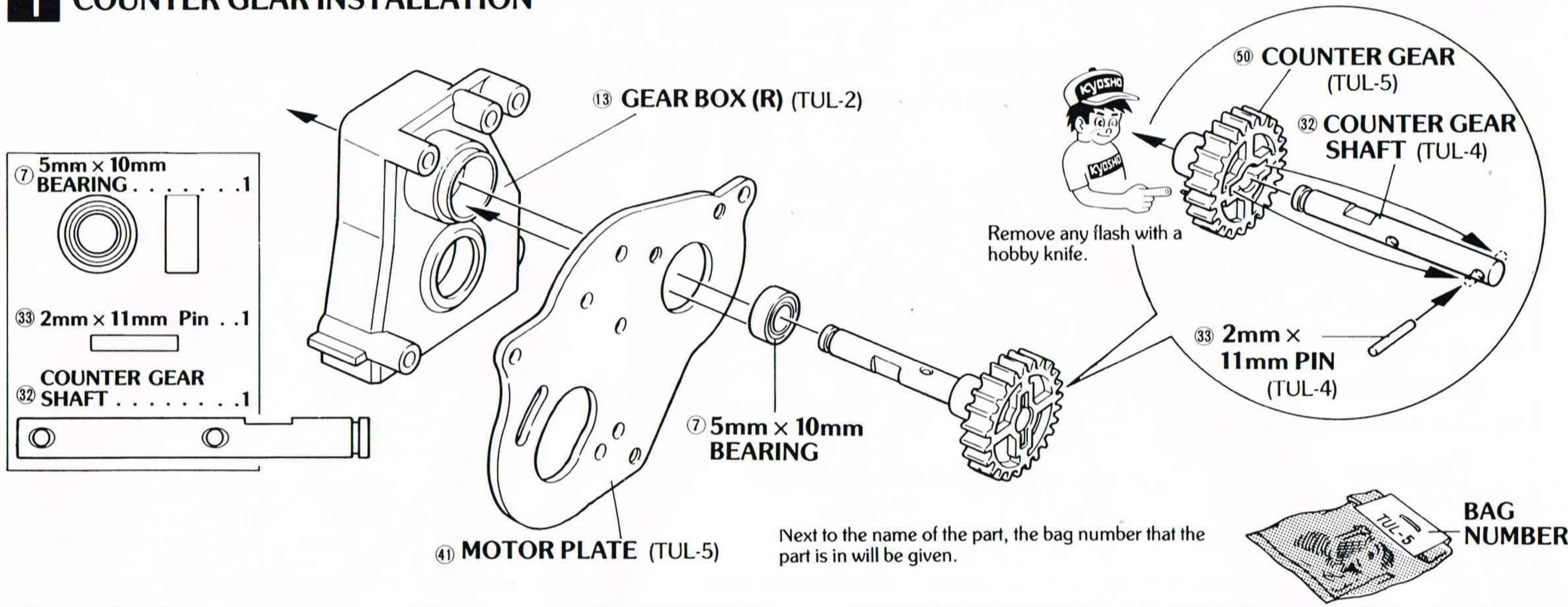
CHARGERS

Model	Name	Time	Rate%	Features
No. 2326	Power Quick Charger	15-25 Min.	70%	7.2V 6-Cell Charging w/Built-In Timer
No. 1845	Peak Charger	20 Min.	100%	Trickle Charging, 4-7 Cells w/Peak detection auto cut-off

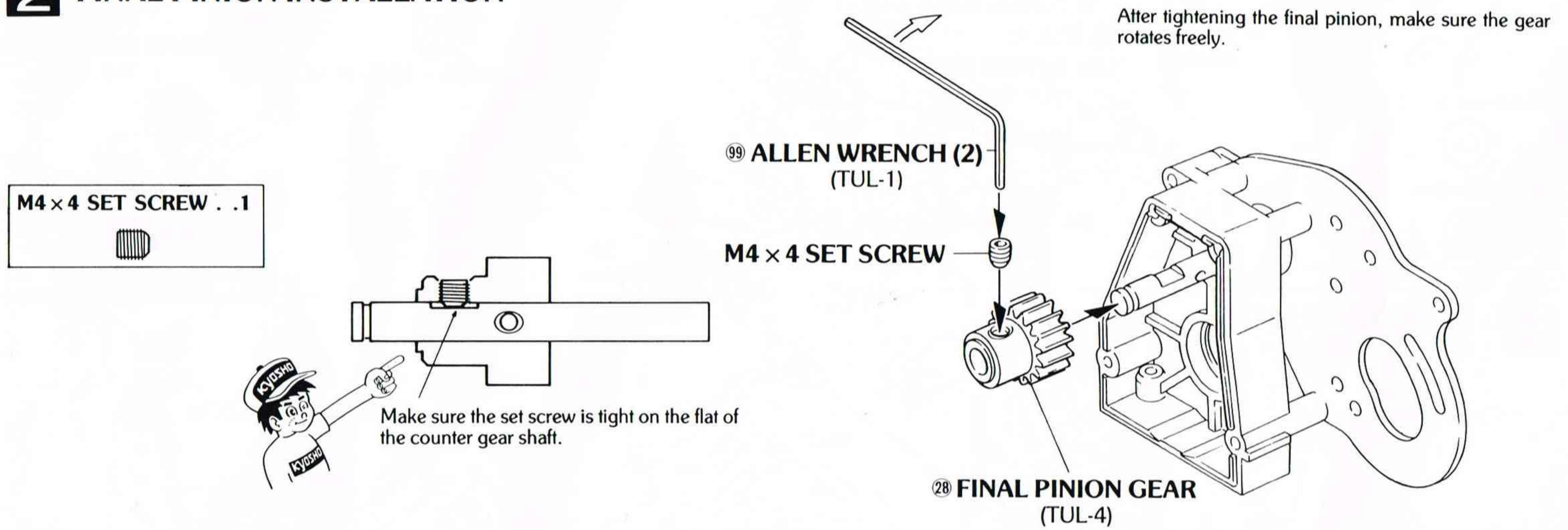
POWER QUICK CHARGERS



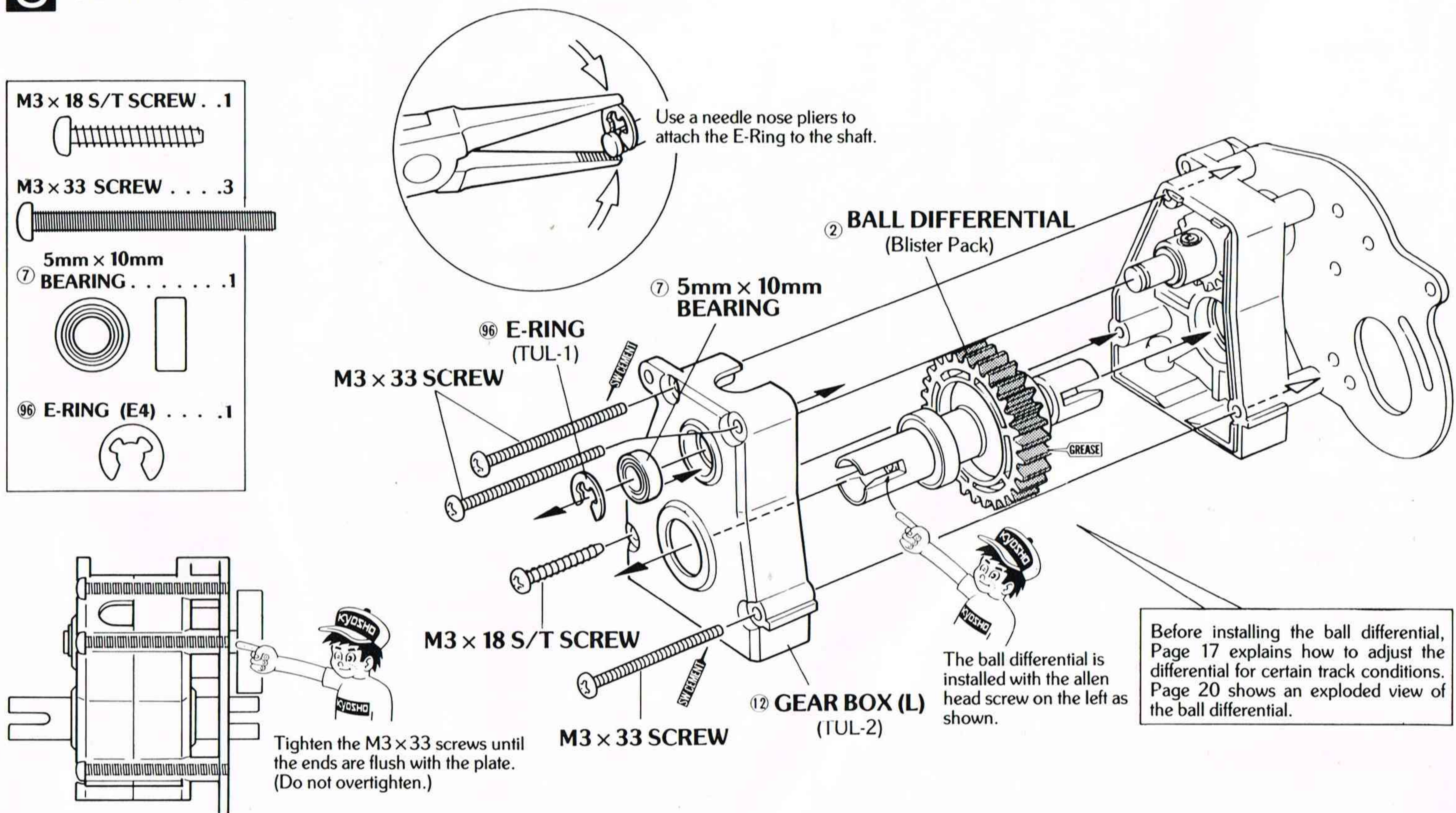
1 COUNTER GEAR INSTALLATION



2 FINAL PINION INSTALLATION

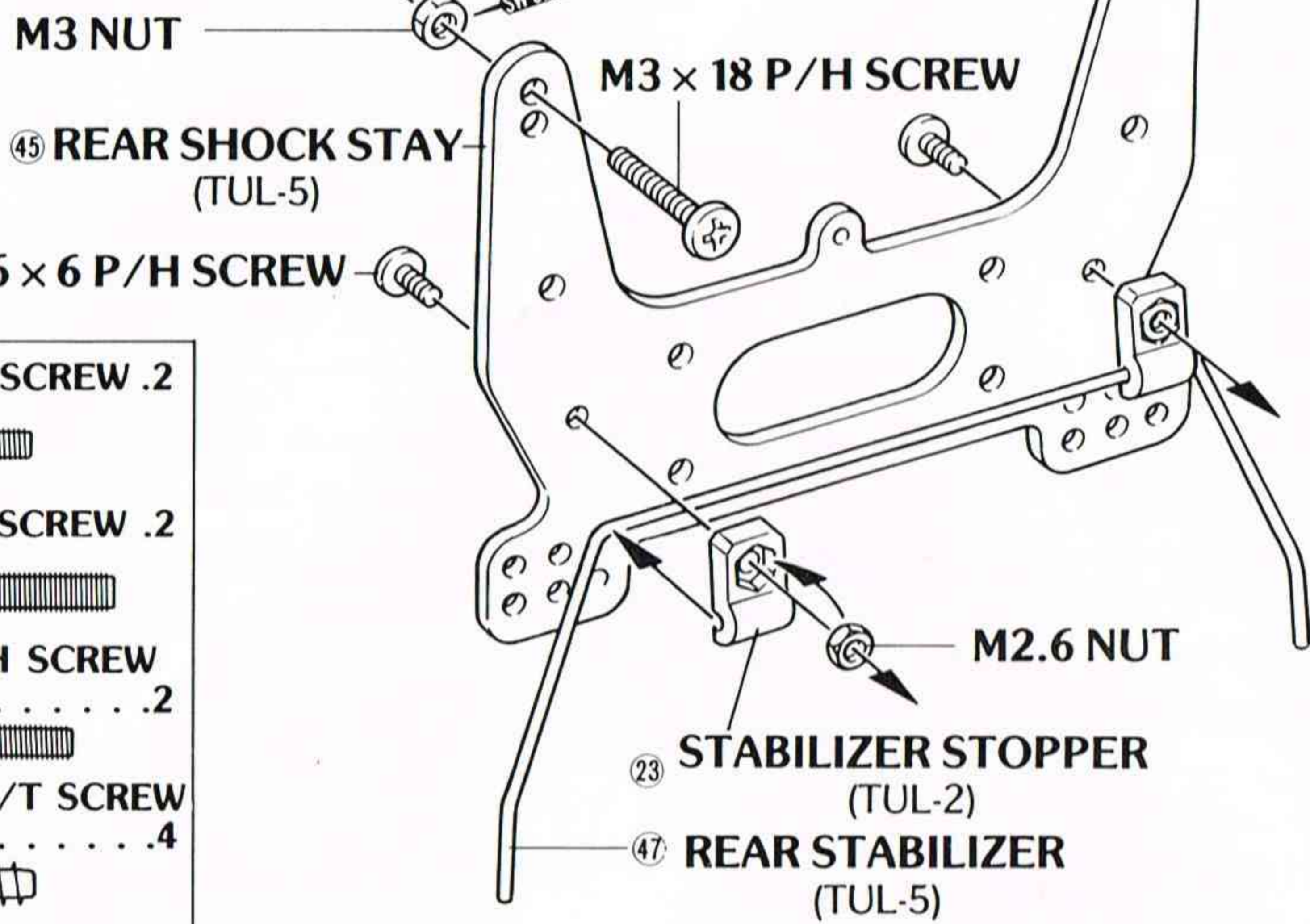


3 GEAR BOX ASSEMBLY



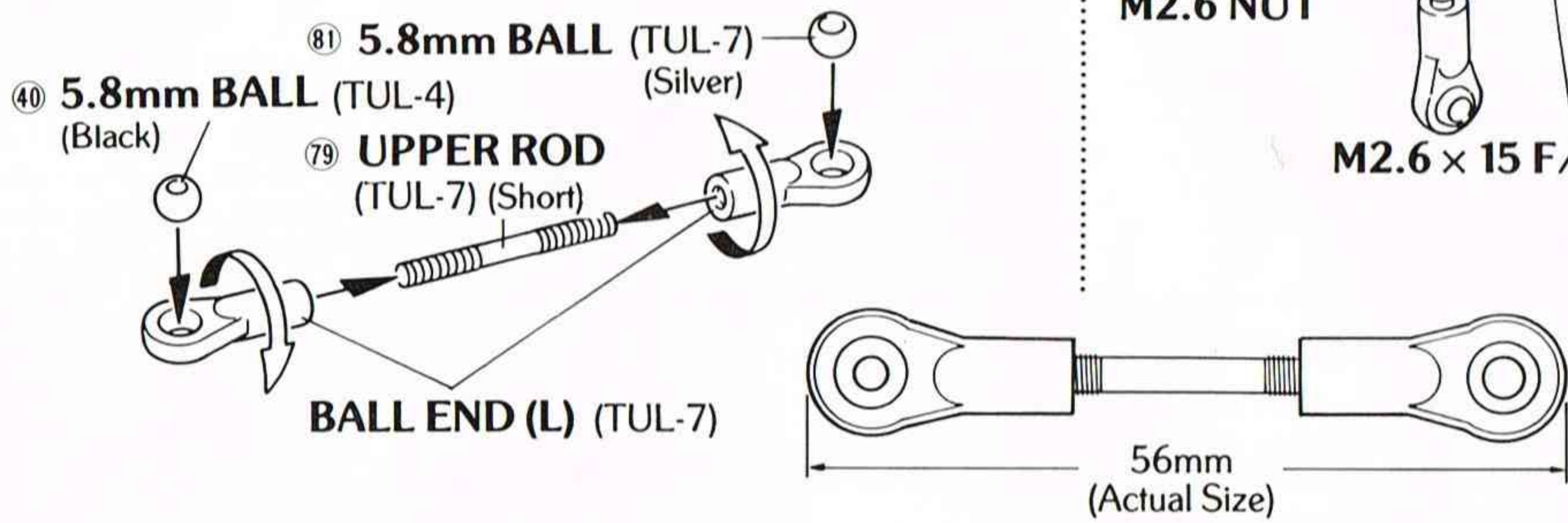
4 ASSEMBLY OF SHOCK STAY

Step 1

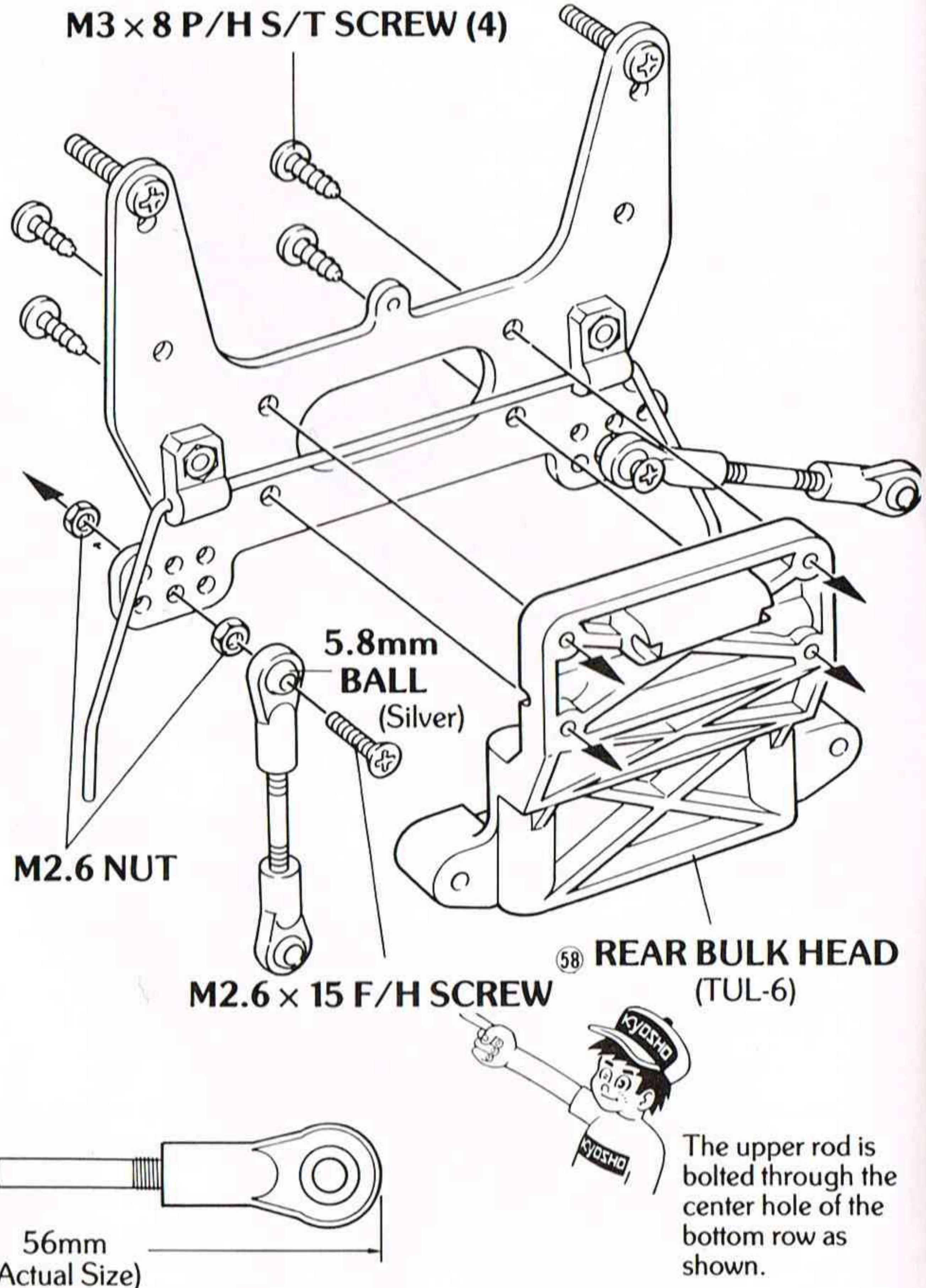


- M2.6 x 6 P/H SCREW .2
- M3 x 18 P/H SCREW .2
- M2.6 x 15 F/H SCREW .2
- M3 x 8 P/H S/T SCREW .4
- M3 NUT .2
- M2.6 NUT .6
- 40 5.8mm BALL (S) .2
- 81 5.8mm BALL (L) .2

Step 2

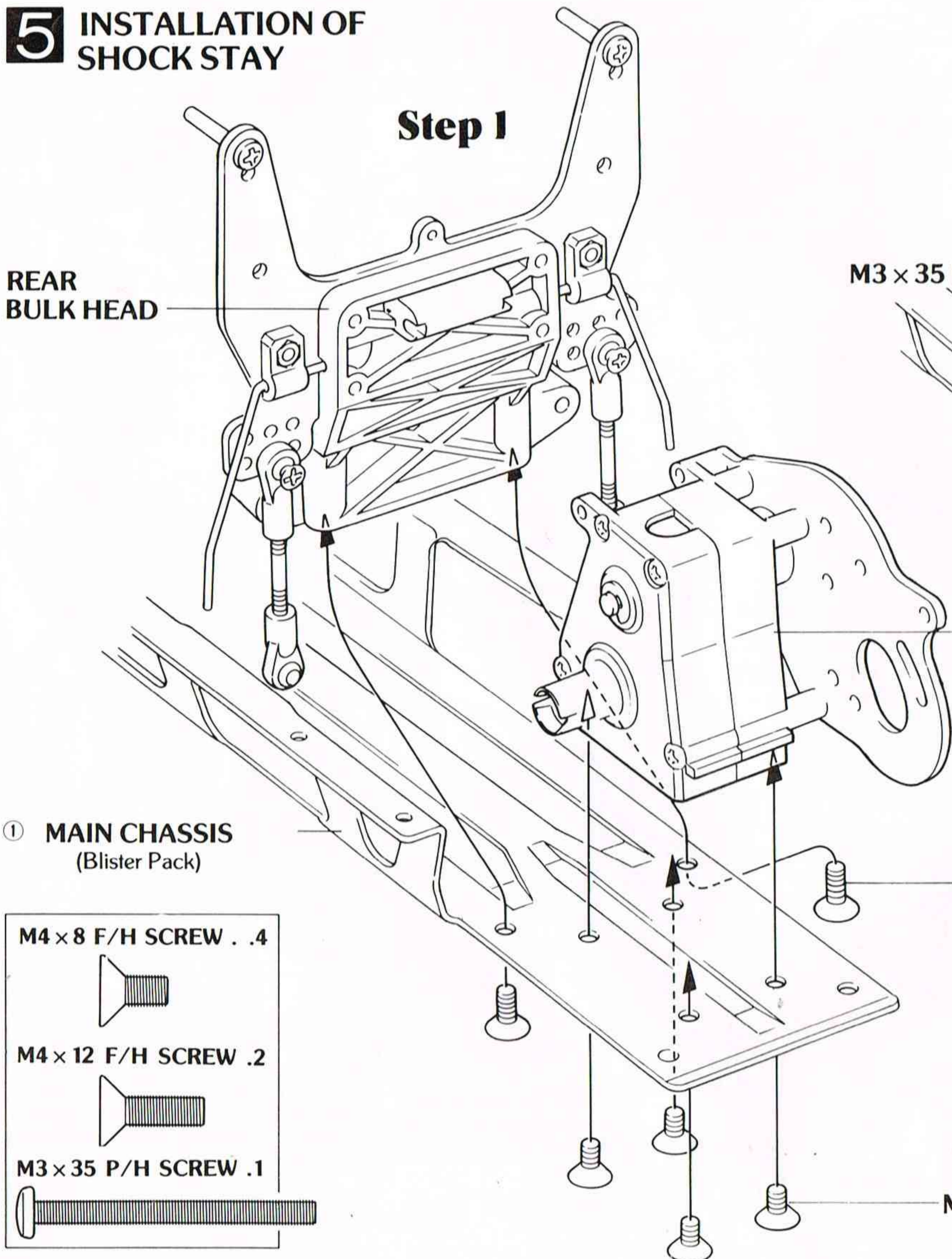


Step 3



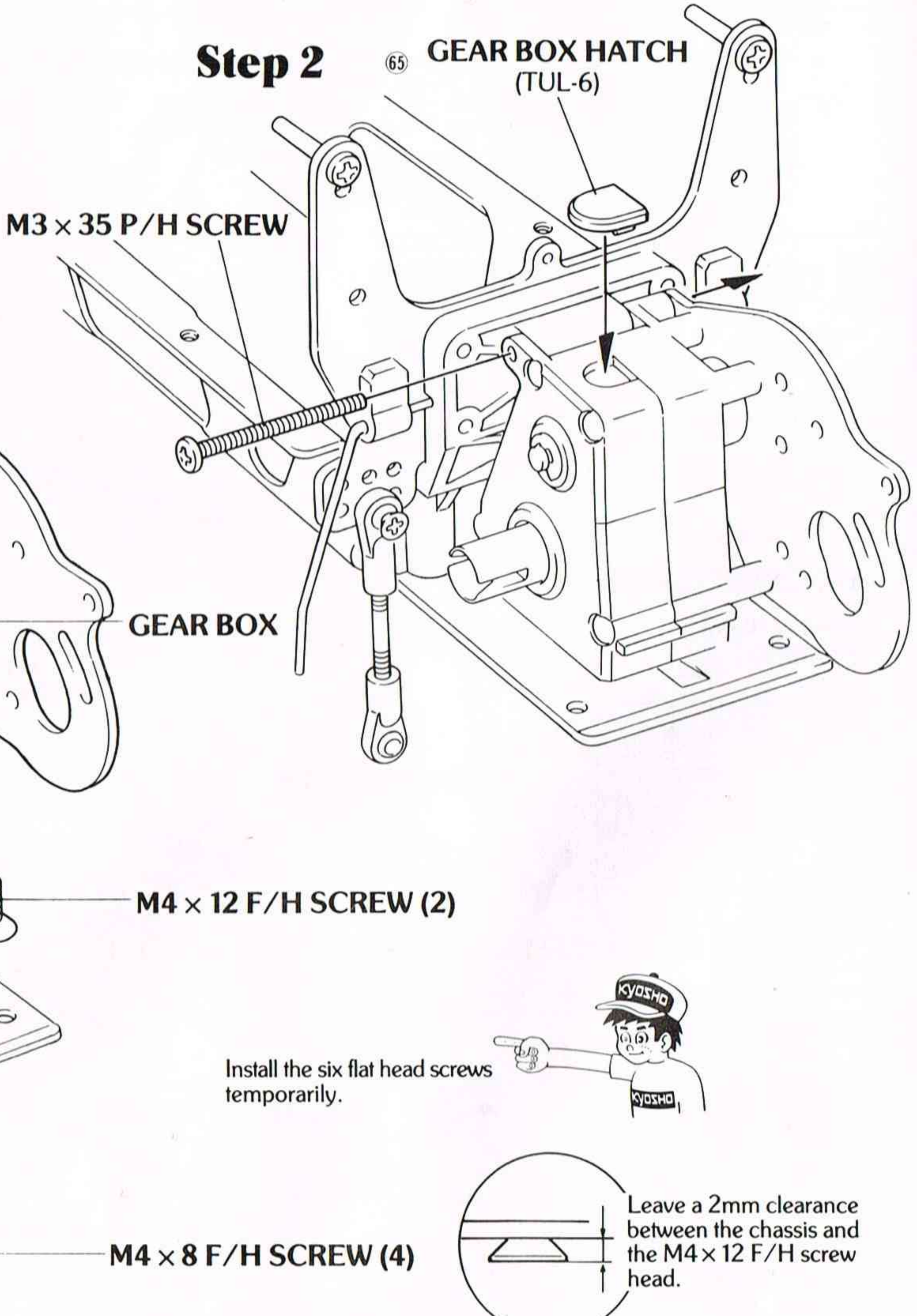
5 INSTALLATION OF SHOCK STAY

Step 1



- M4 x 8 F/H SCREW .4
- M4 x 12 F/H SCREW .2
- M3 x 35 P/H SCREW .1

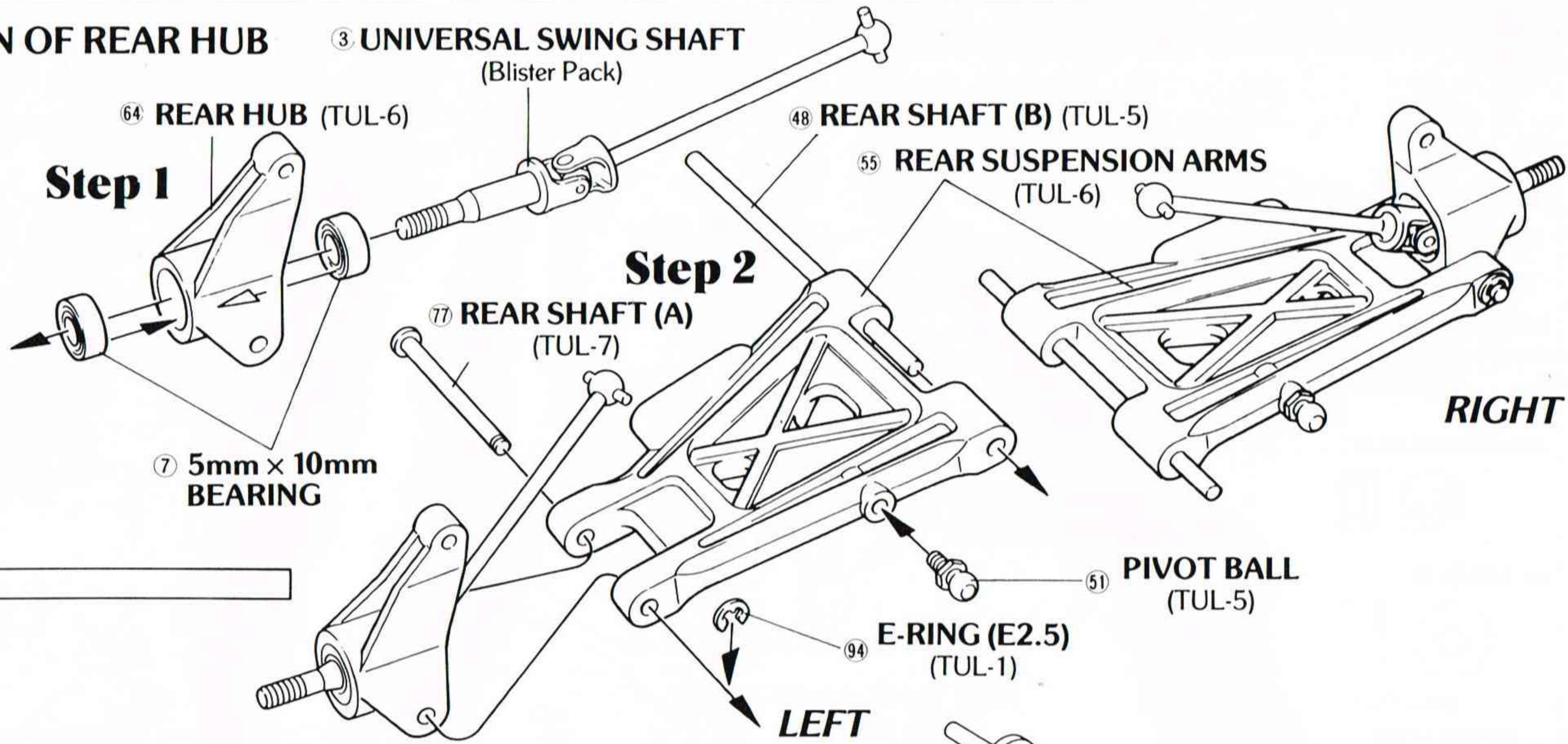
Step 2



6 INSTALLATION OF REAR HUB

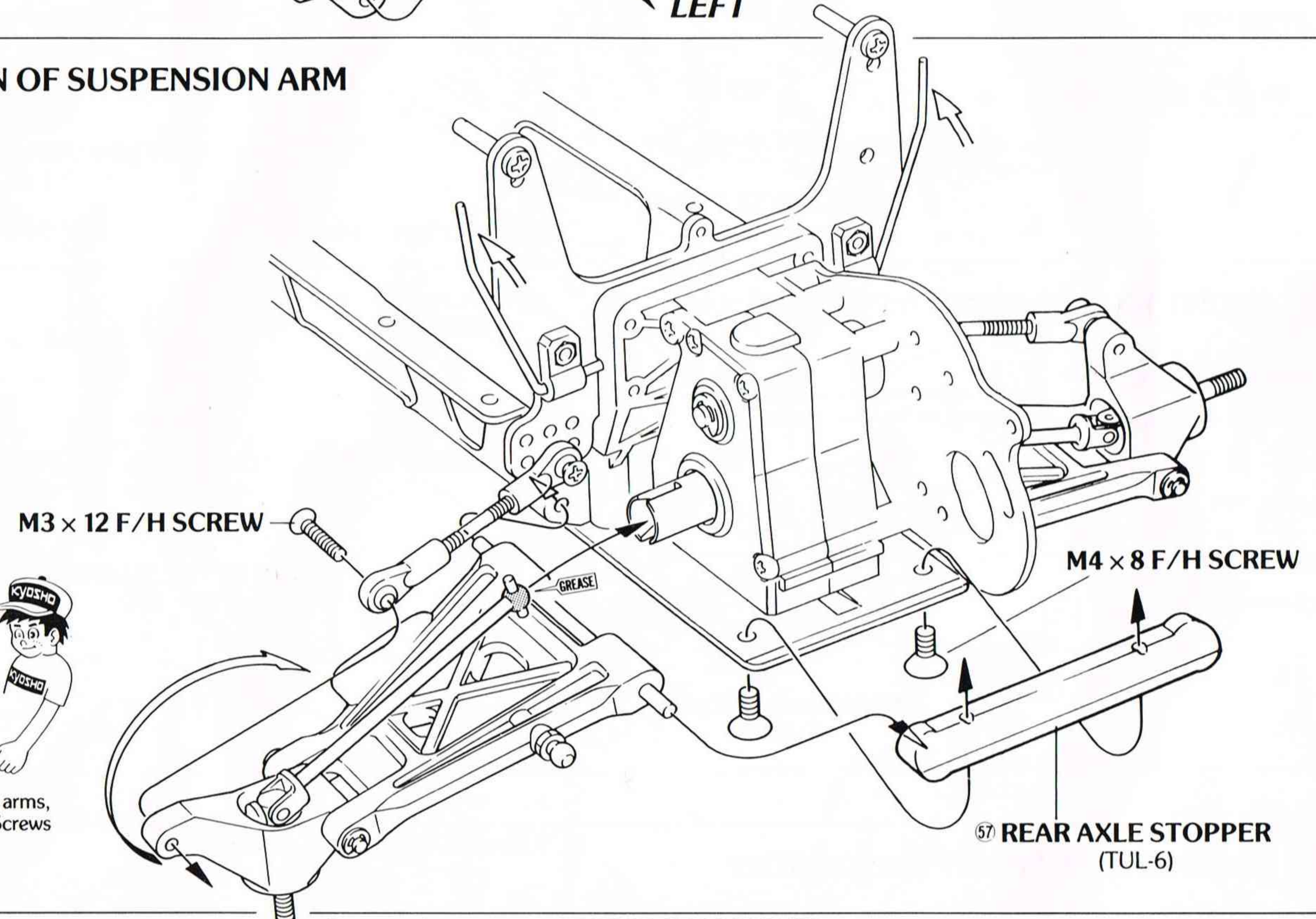
3 UNIVERSAL SWING SHAFT (Blister Pack)

- ⑦ 5mm x 10mm BEARING 4
- ⑤① PIVOT BALL 2
- ⑦⑦ REAR SHAFT (A) 2
- ④⑧ REAR SHAFT (B) 2
- ⑨④ E-RING (E2.5) 2



7 INSTALLATION OF SUSPENSION ARM

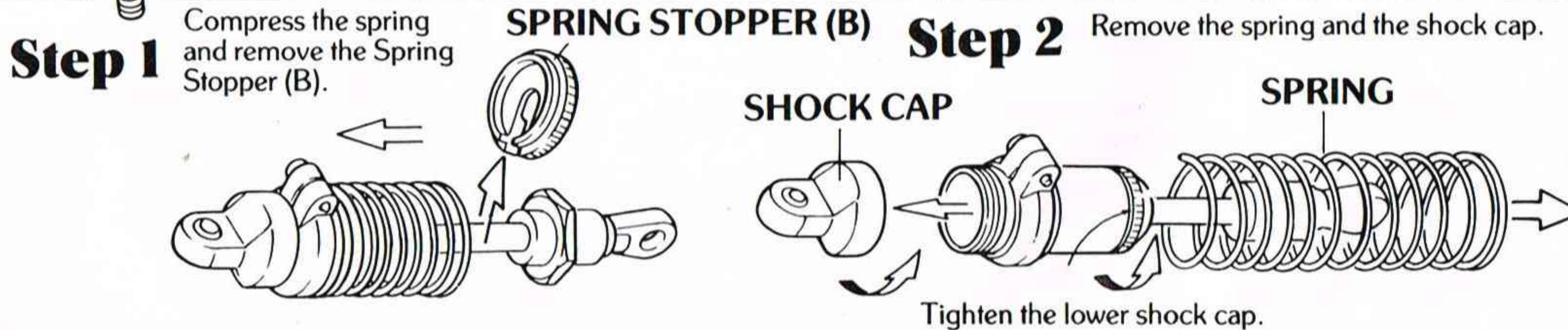
- M3 x 12 F/H SCREW . . 2
- M4 x 8 F/H SCREW . . 2



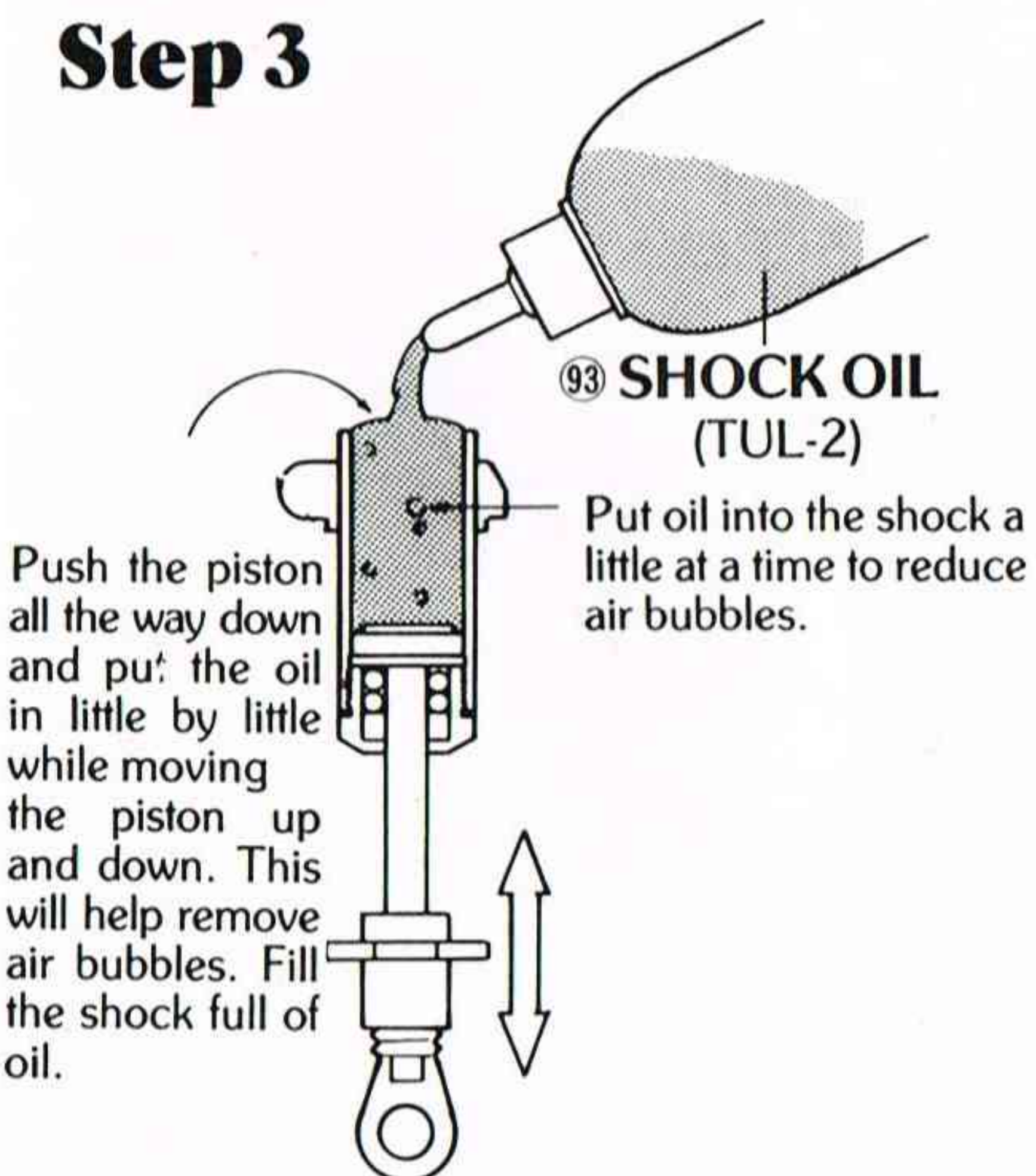
After installing the suspension arms, tighten the six Flat Head Screws installed temporarily in Step 5.

8 FILLING THE SHOCK WITH OIL

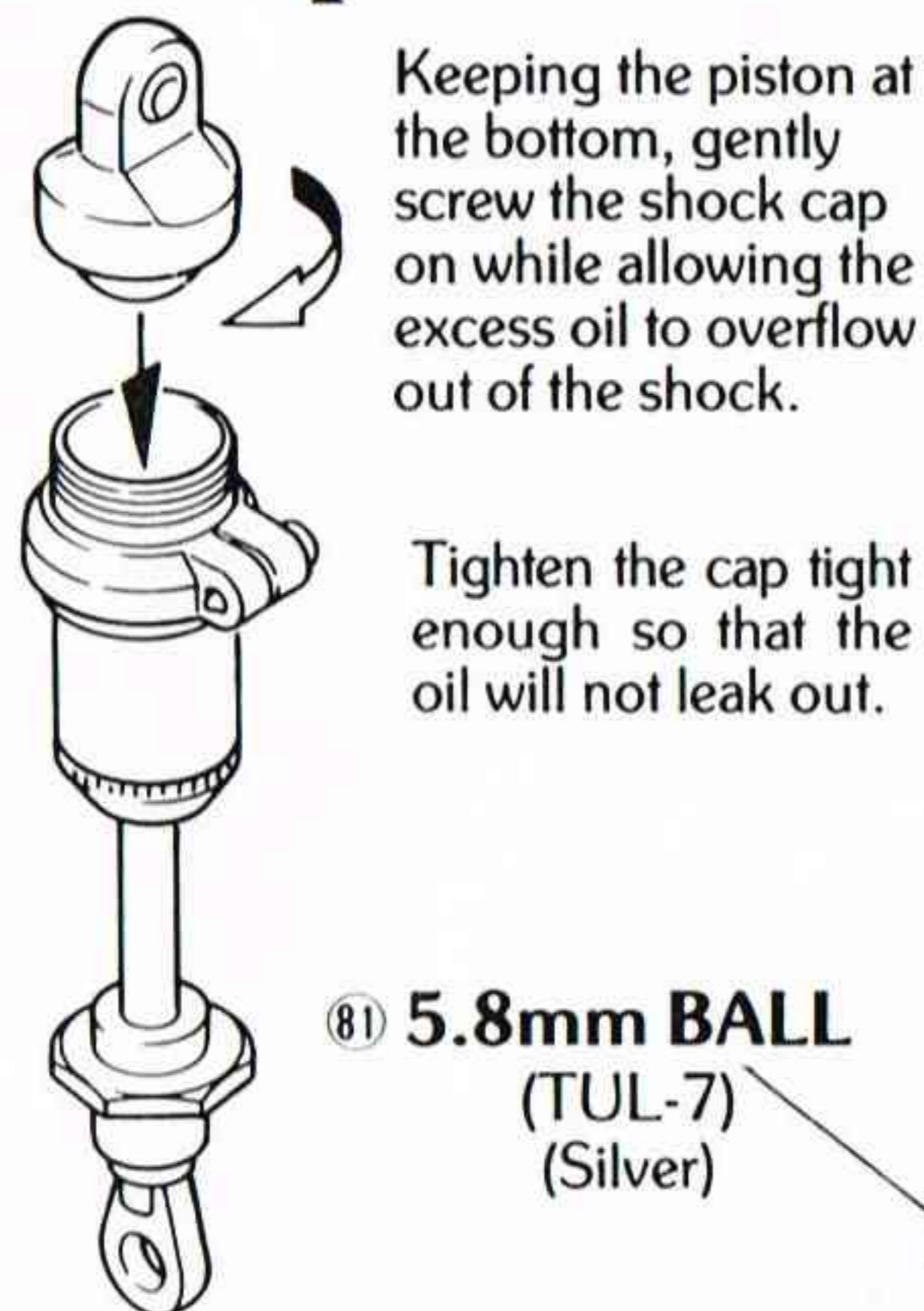
- ⑧① 5.8mm BALLS 4 (Silver)



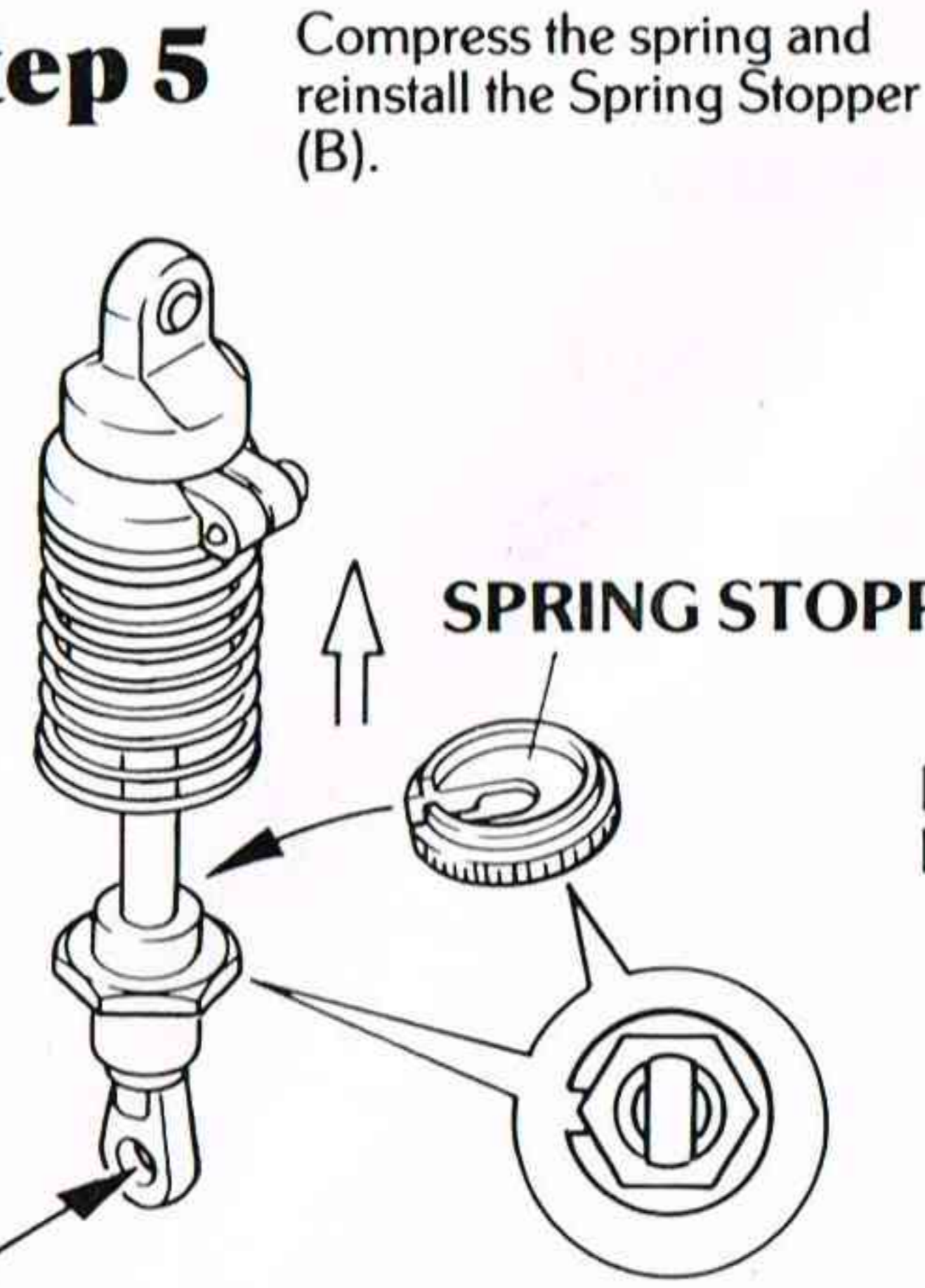
Step 3



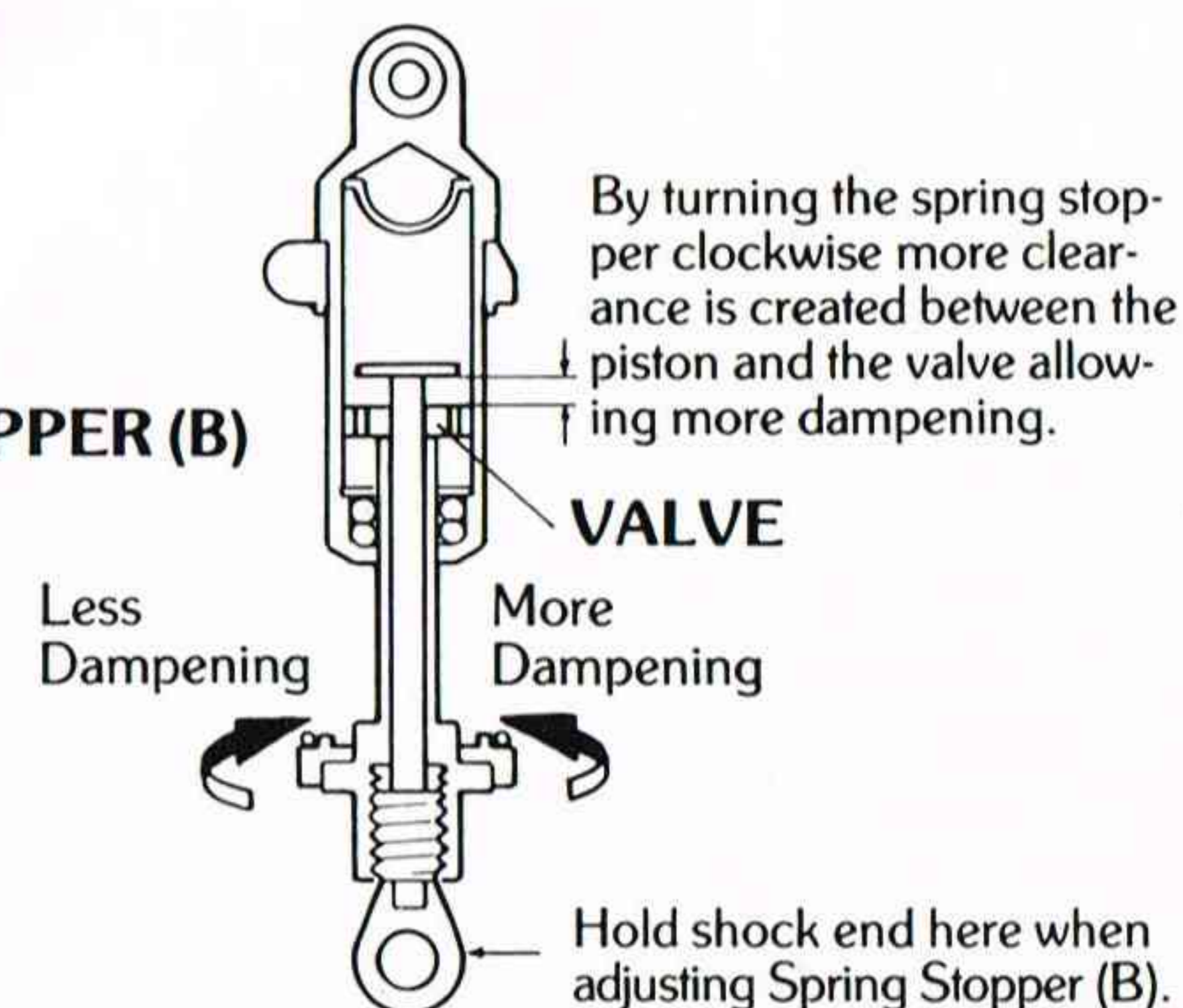
Step 4



Step 5

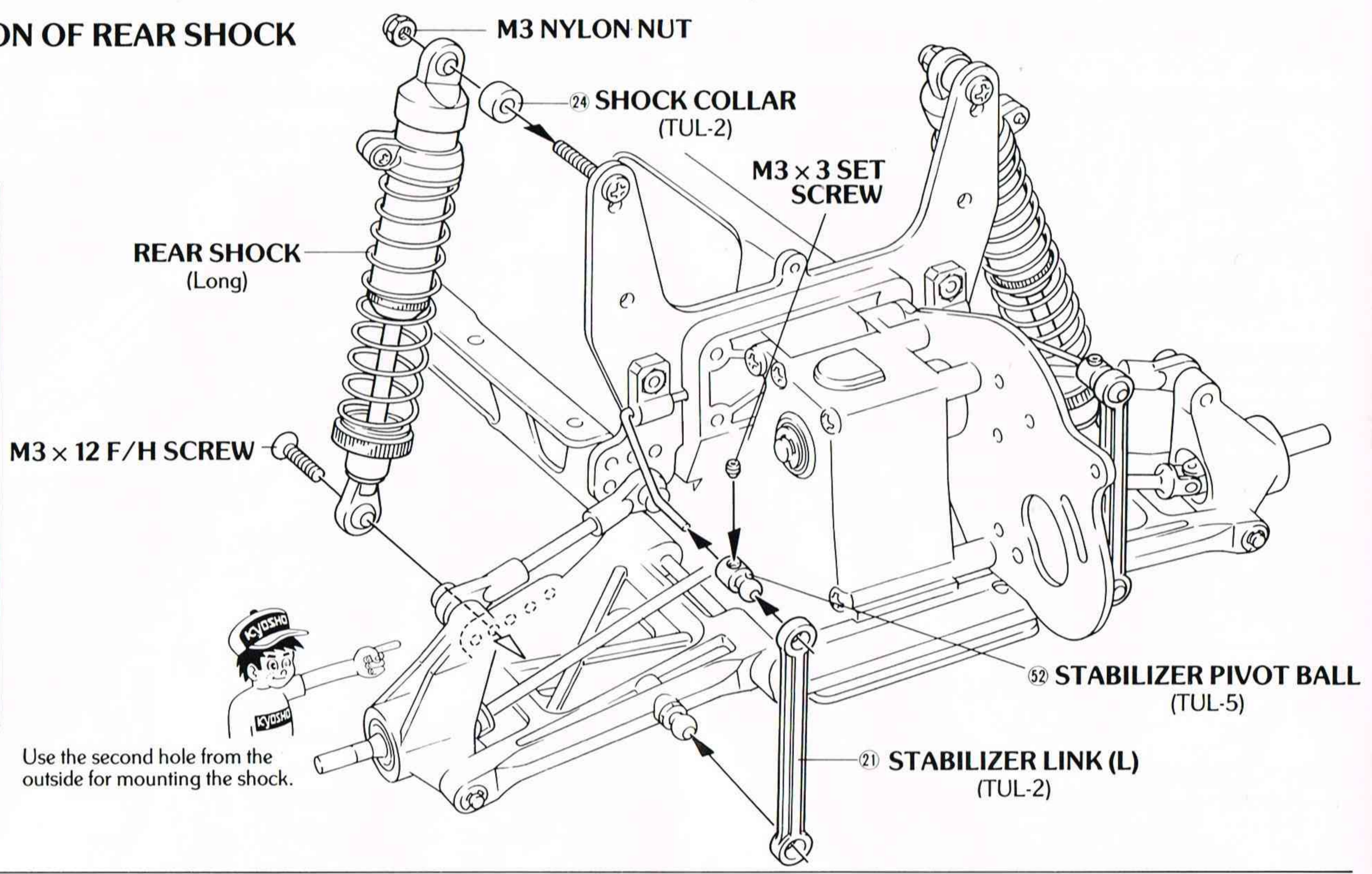


The shock can be adjusted for more or less dampening.



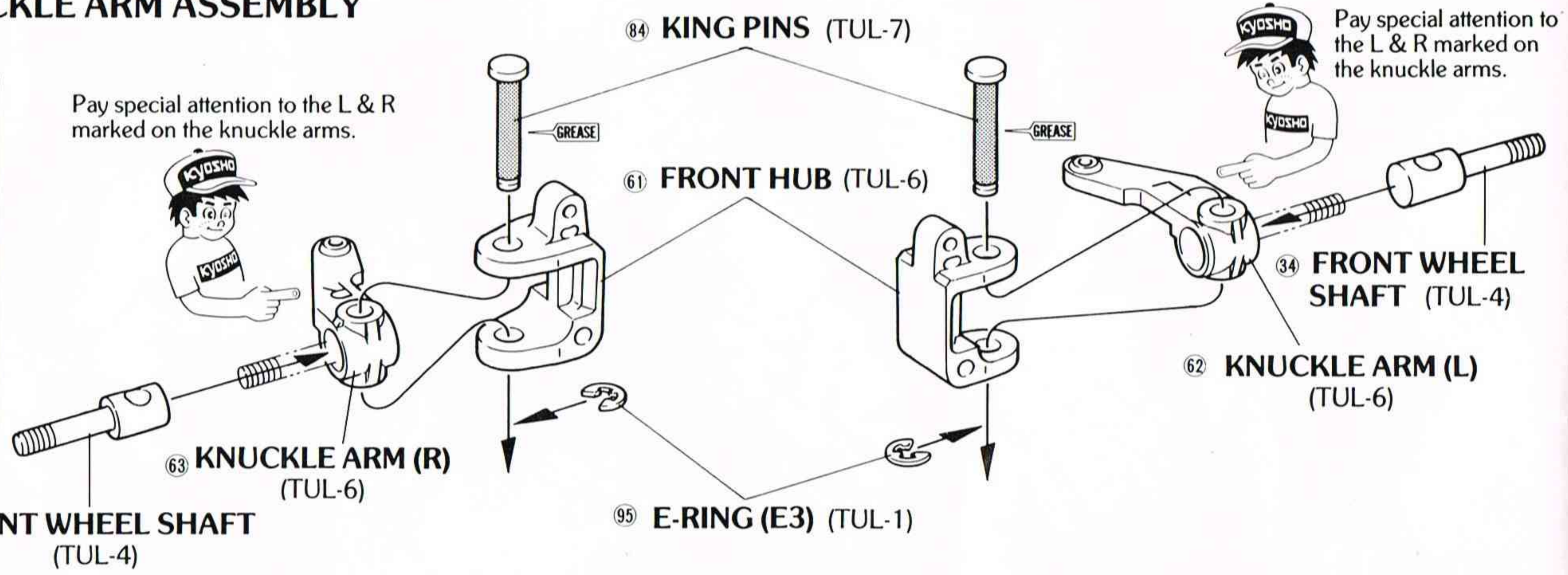
9 INSTALLATION OF REAR SHOCK

- M3 x 3 SET SCREW . . . 2
- M3 x 12 F/H SCREW . 2
- M3 NYLON NUT 2
- 24 SPACER 2
(5mm Thick)
- STABILIZER
52 PIVOT BALL 2



10 FRONT KNUCKLE ARM ASSEMBLY

- 34 FRONT WHEEL SHAFT 2
- 84 KING PIN 2
- 95 E-RING (E-3) 2

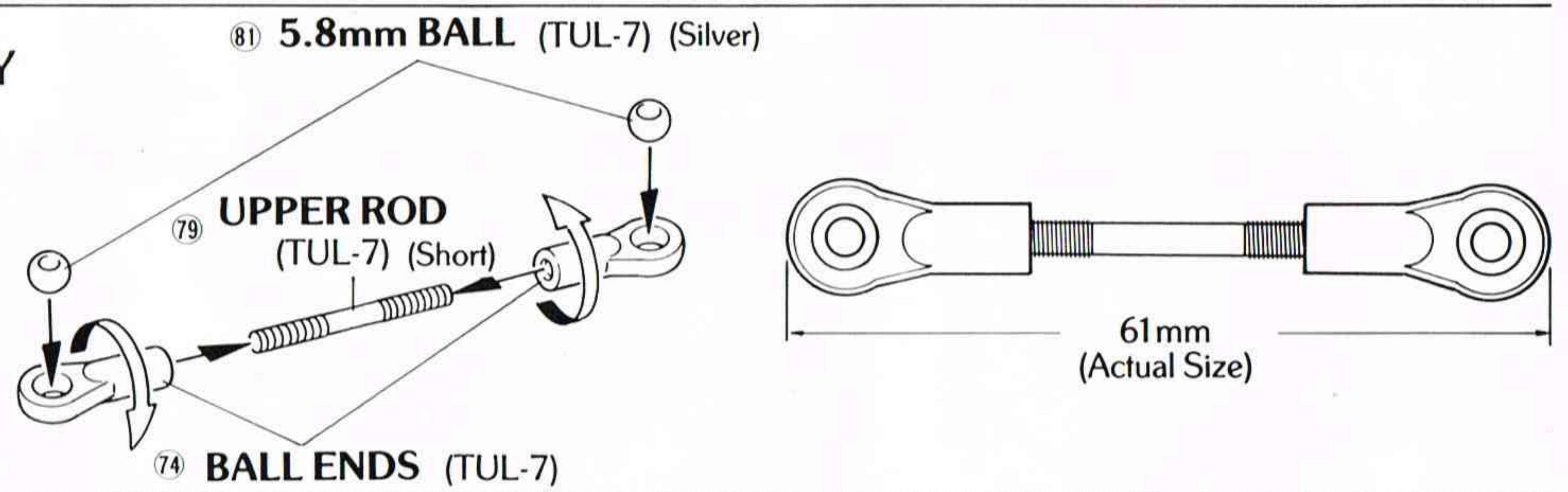


11 ASSEMBLY OF FRONT SHOCK STAY

- M3 x 18 P/H SCREW . . . 2
- M3 x 15 F/H SCREW . . . 2
- M3 x 8 P/H S/T SCREW . . . 2
- M3 NUT 6
- 81 5.8mm BALL 2 (Silver)

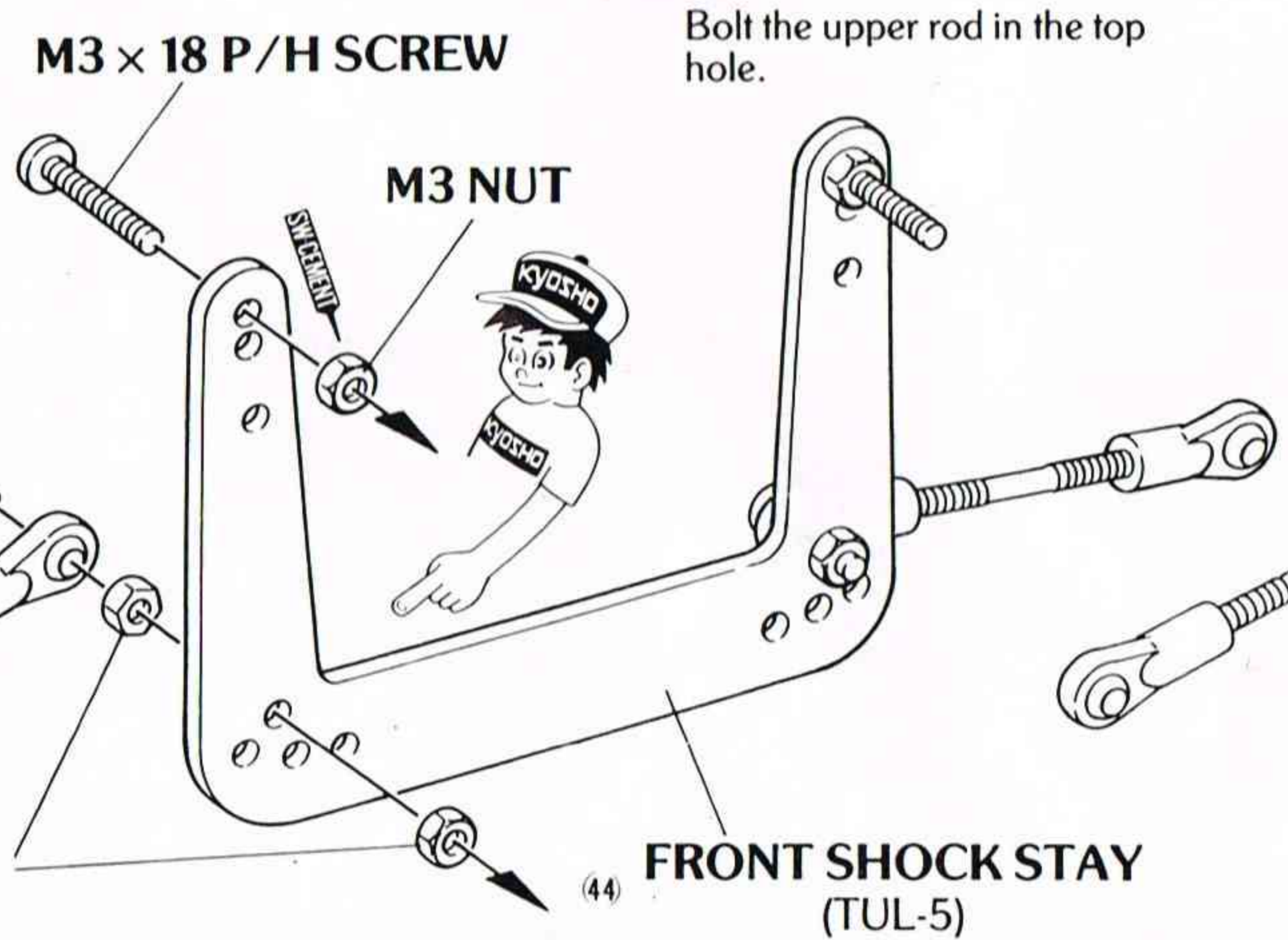
Step 1

Assemble two upper rods as shown.

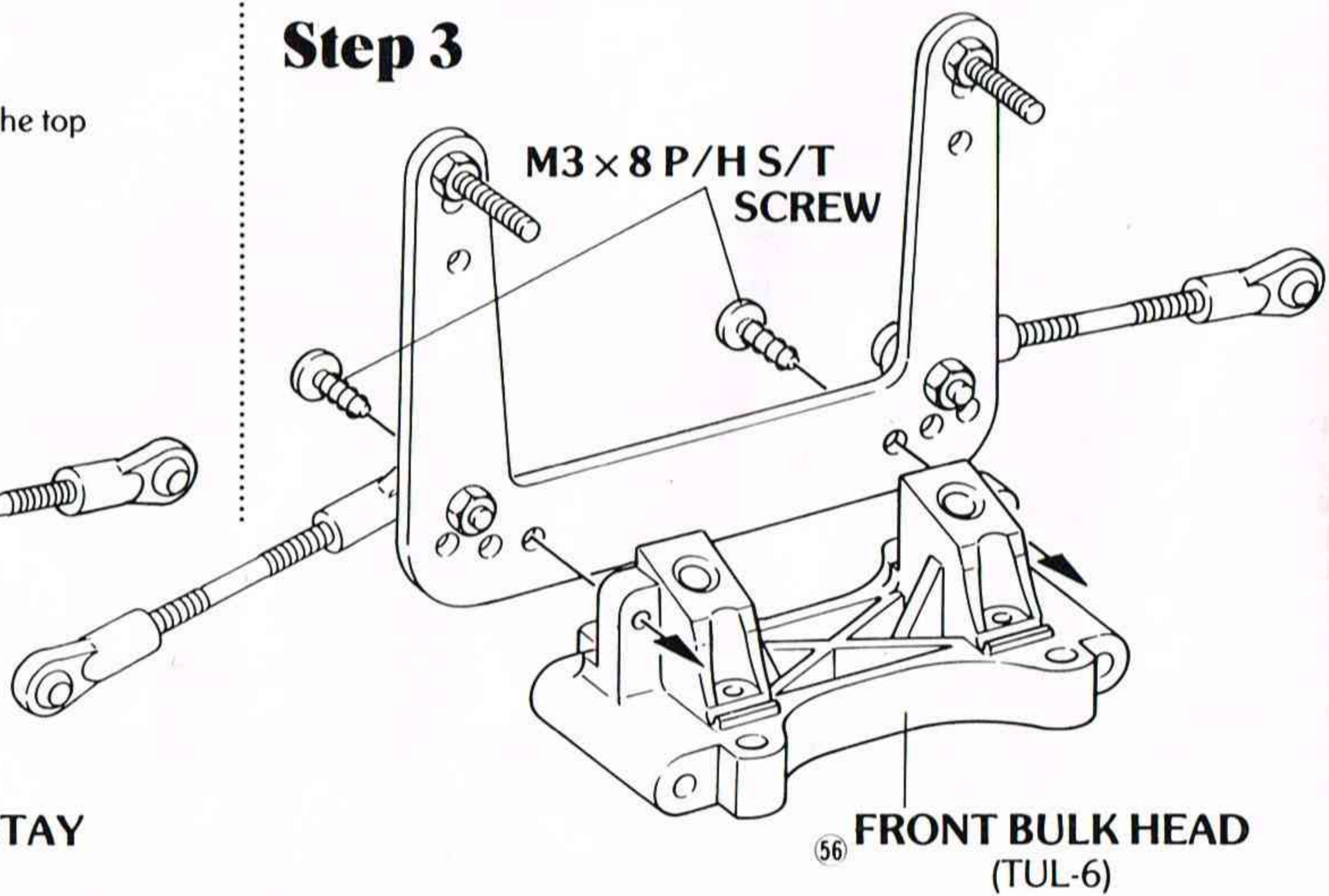


Step 2

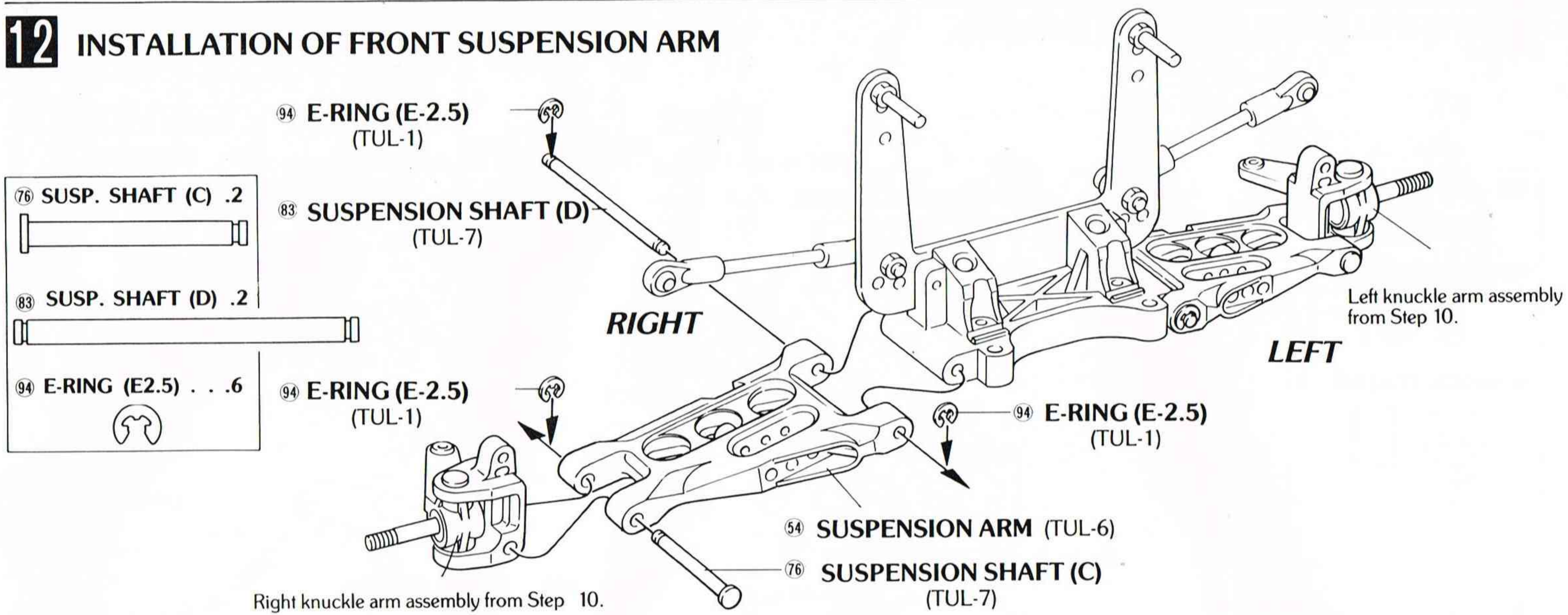
Bolt the upper rod in the top hole.



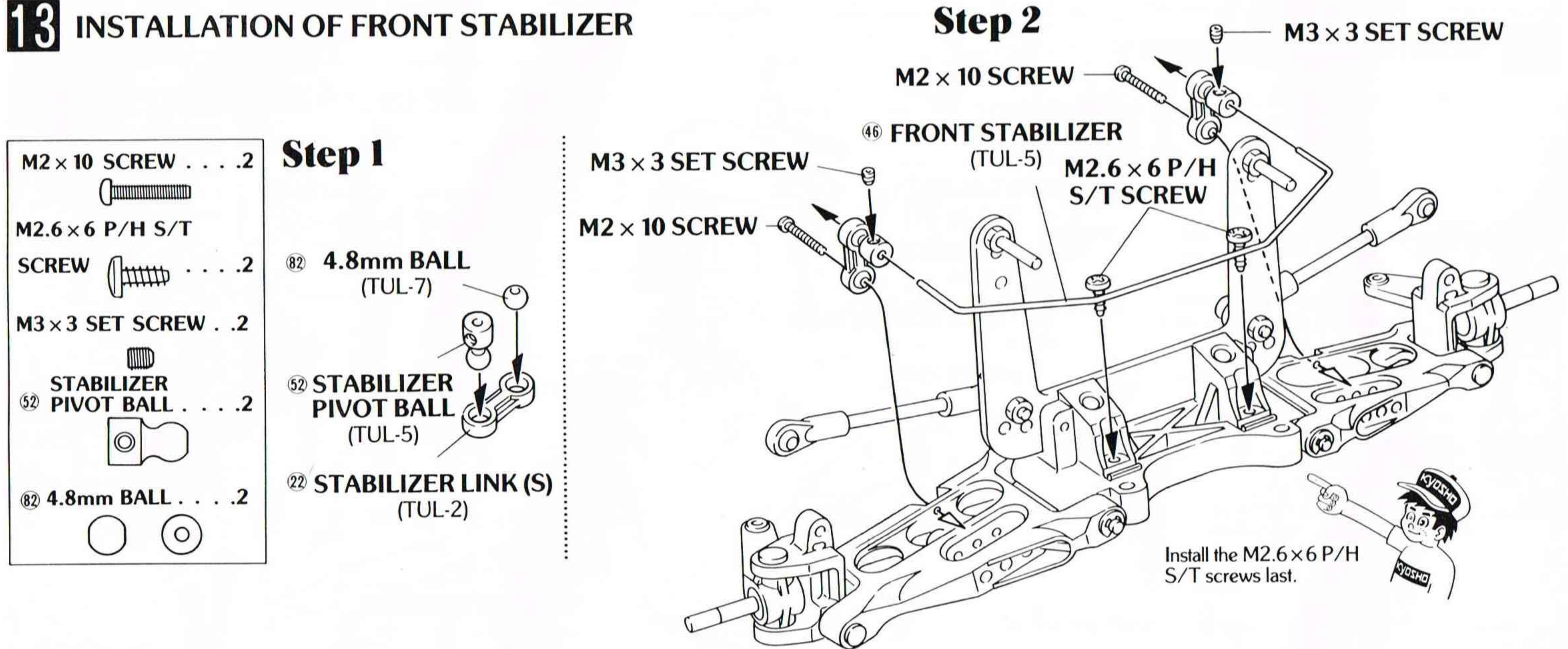
Step 3



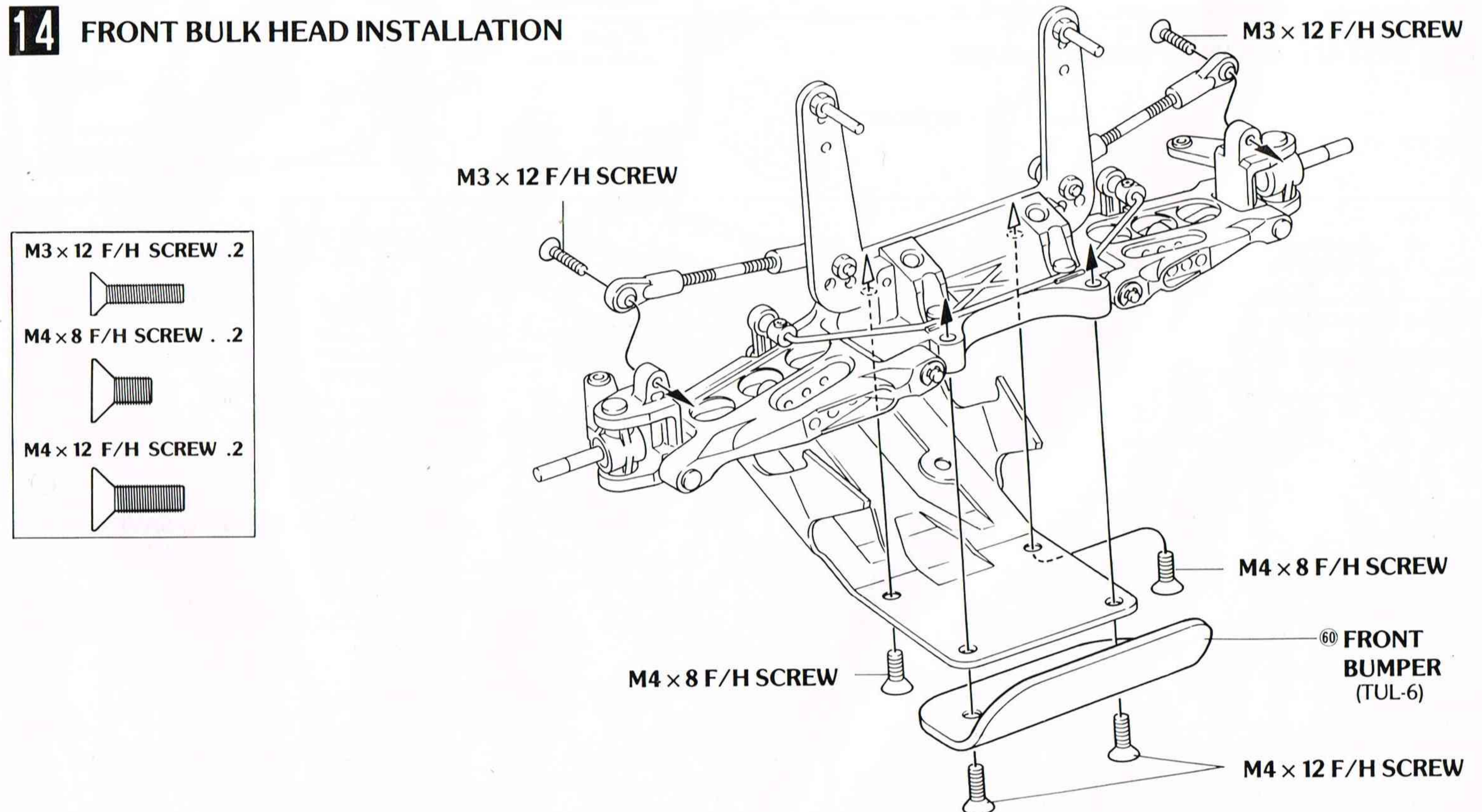
12 INSTALLATION OF FRONT SUSPENSION ARM



13 INSTALLATION OF FRONT STABILIZER

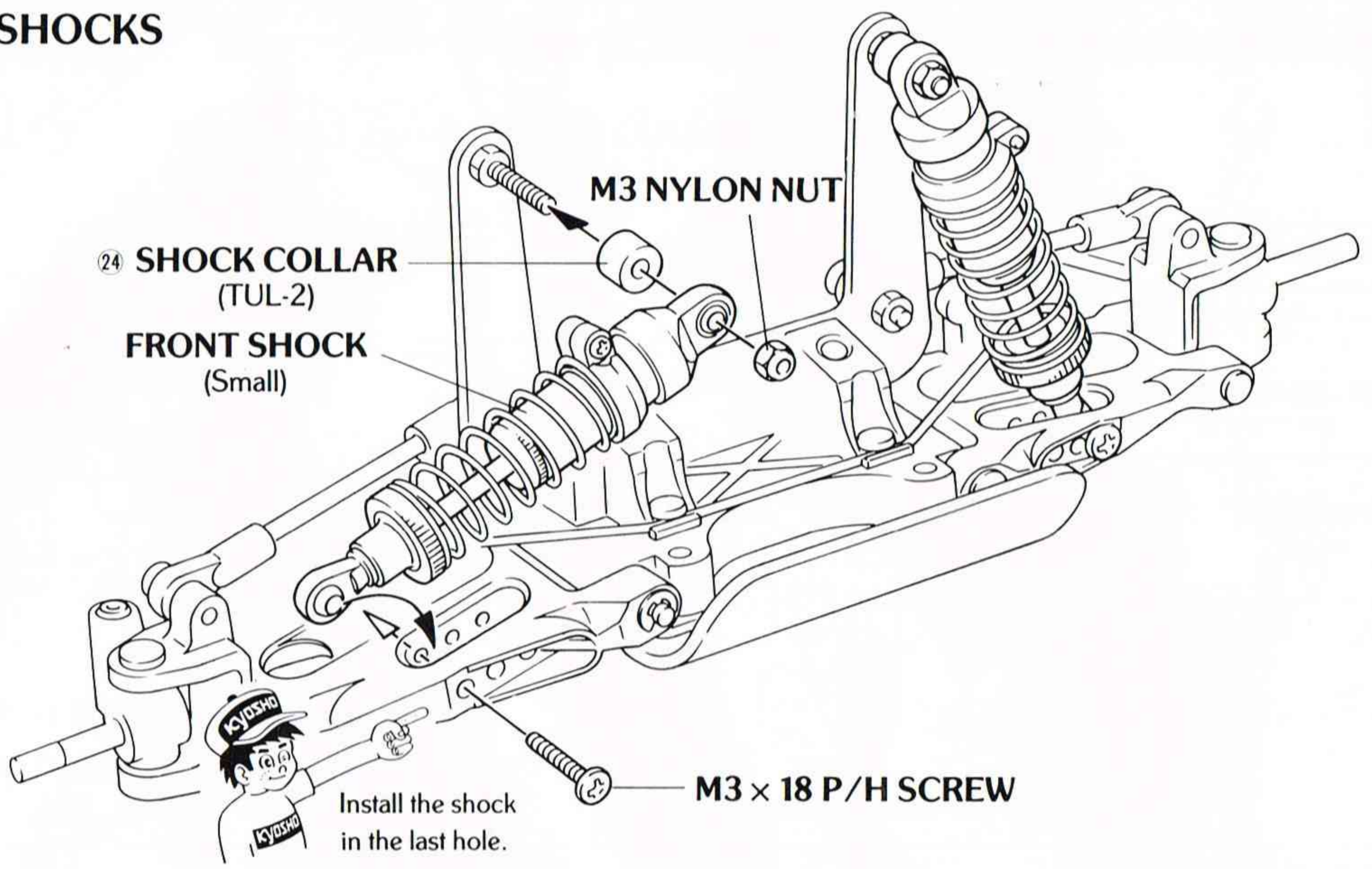


14 FRONT BULK HEAD INSTALLATION



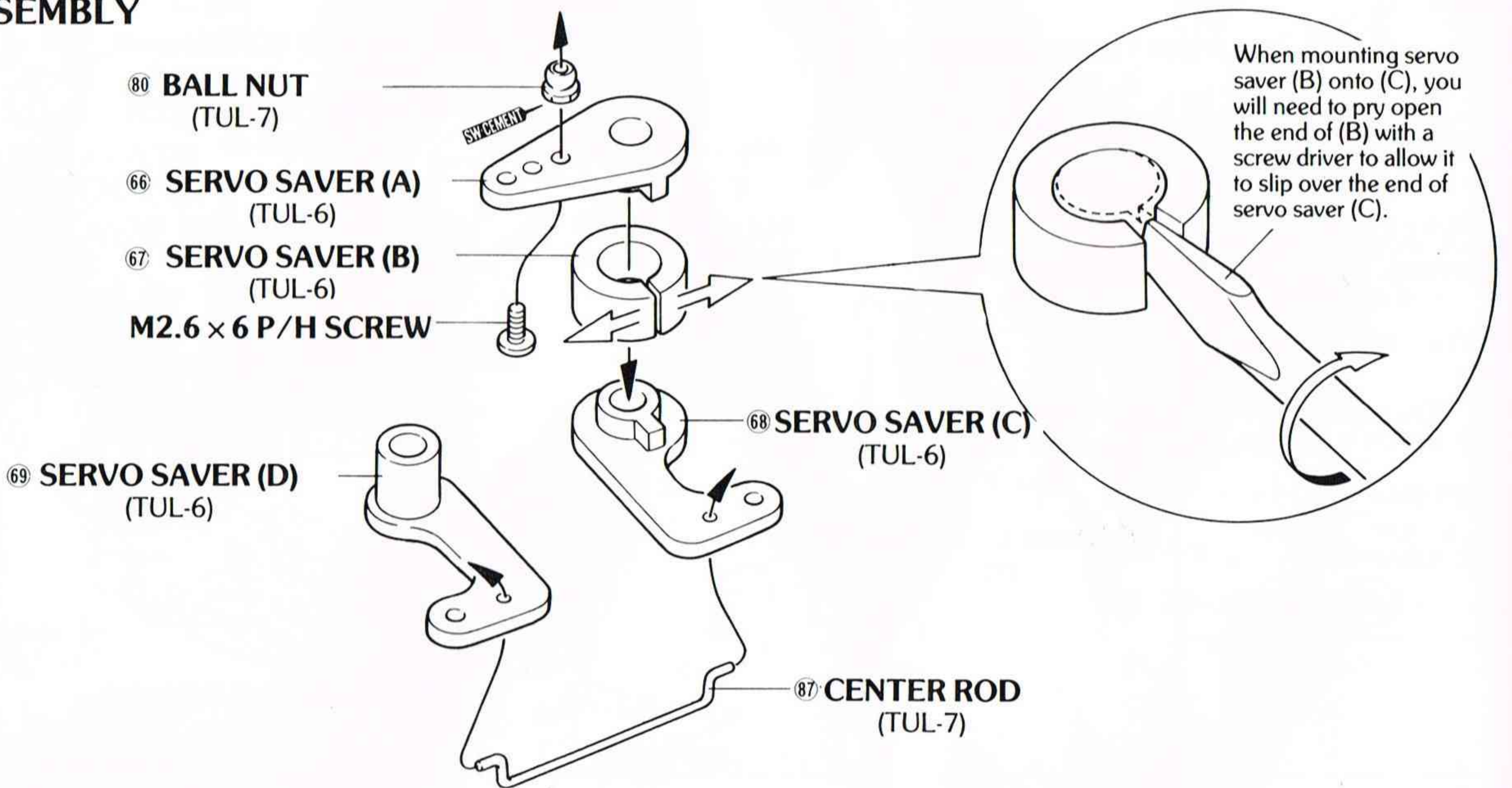
15 INSTALLATION OF FRONT SHOCKS

- M3 x 18 P/H SCREW .2
- M3 NYLON NUT2
- 24 SHOCK COLLAR (TUL-2)
- (5mm)



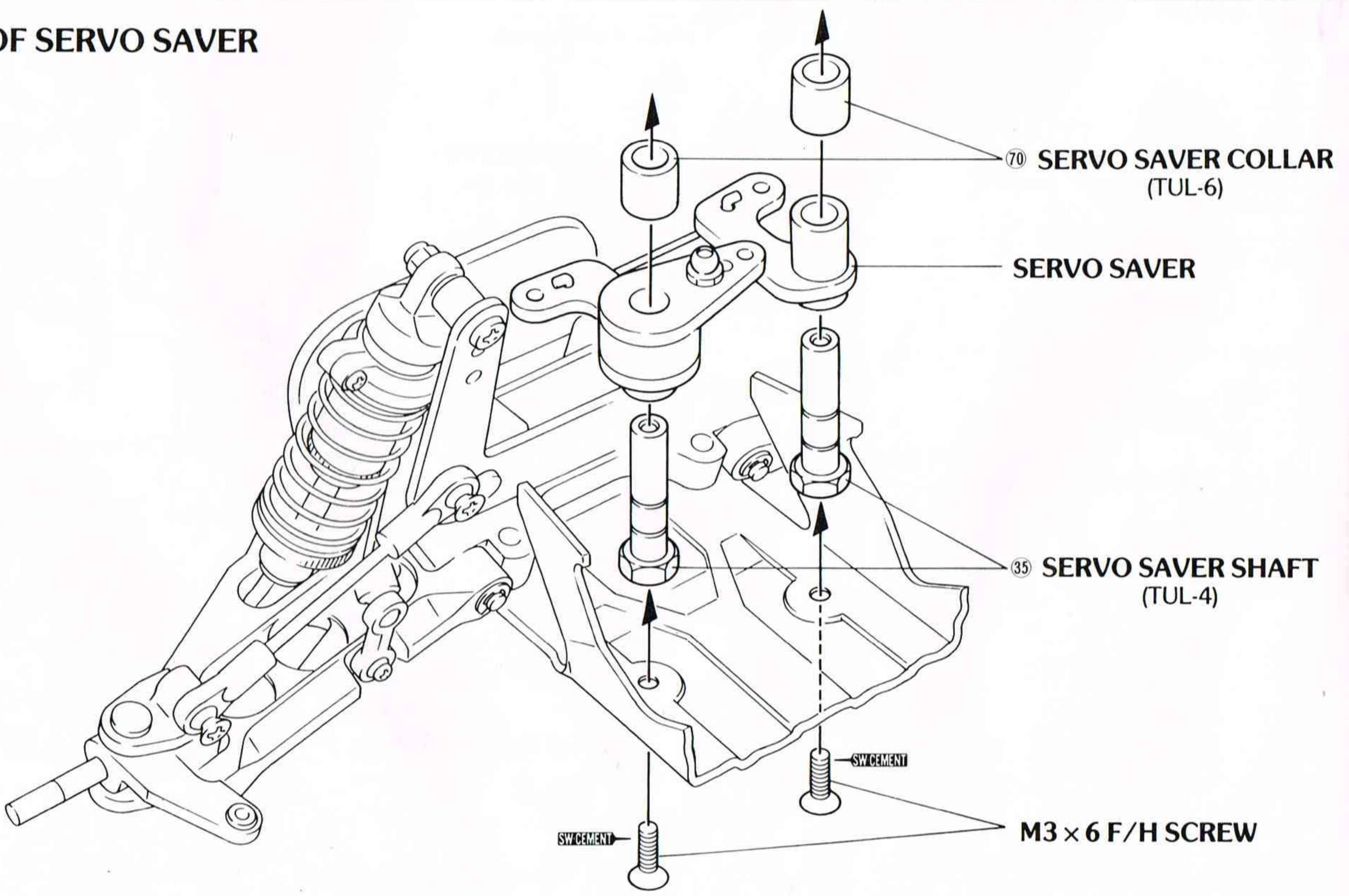
16 SERVO SAVER ASSEMBLY

- M2.6 x 6 P/H SCREW .1
- 80 BALL NUT1
- 87 CENTER ROD1



17 INSTALLATION OF SERVO SAVER

- M3 x 6 F/H SCREW . .2

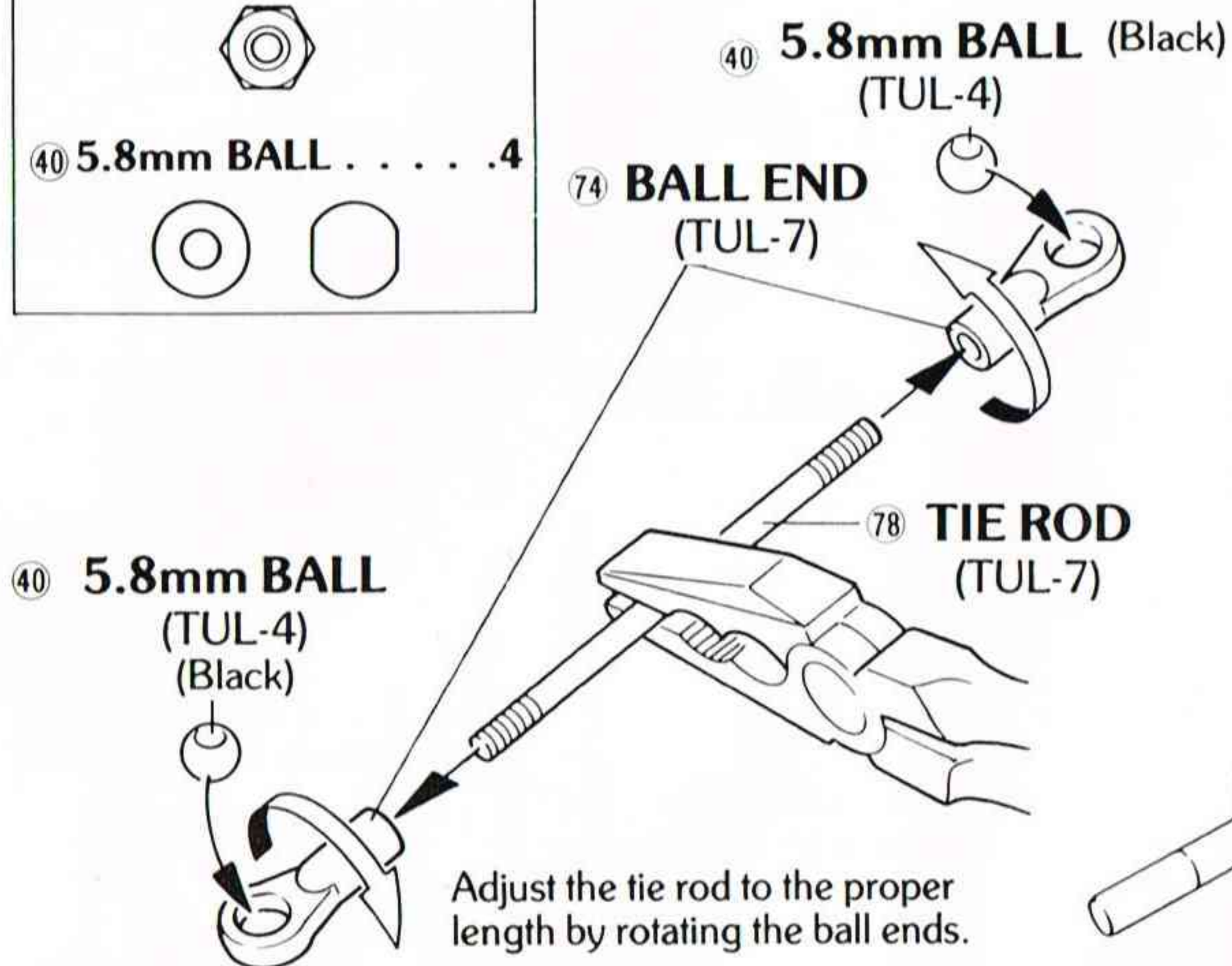


18 TIE ROD INSTALLATION

- M2.6 x 12 F/H SCREW .4
- M2.6 NUT4
- 40 5.8mm BALL4

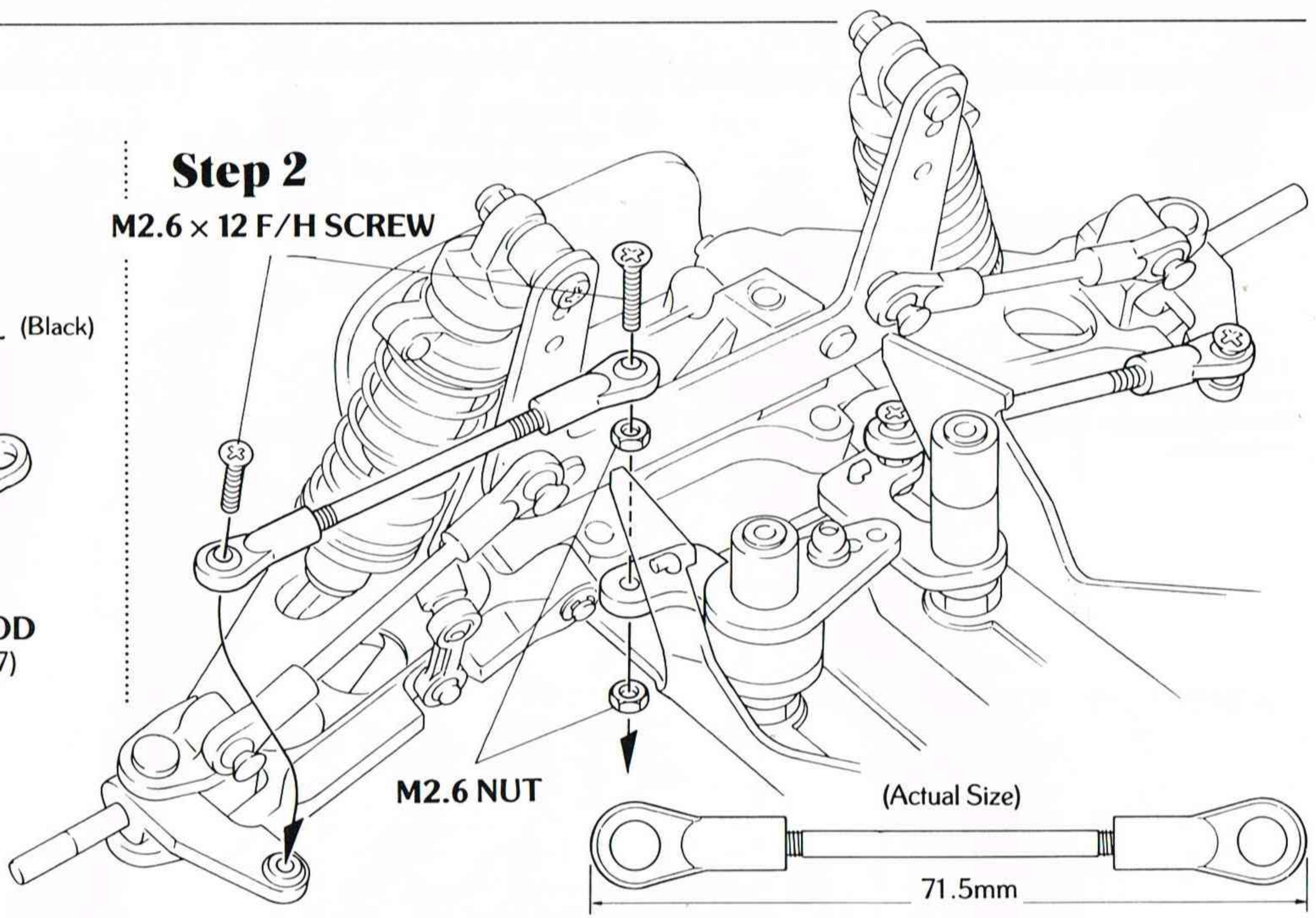
Step 1

Assemble the two tie rods as shown.



Step 2

M2.6 x 12 F/H SCREW



19 CHECKING THE RADIO SYSTEM

Operate the components in sequence 1 thru 6.

2 TX ANTENNA

6 Set trim levers to neutral.

STEERING CONTROL LEVER

3 Turn transmitter on.

SPEED CONTROL SERVO

SWITCH

5 Turn the receiver switch on. When turning the rotor, the motor will run.

STEERING SERVO

RECEIVER

1 Extend the receiver antenna.

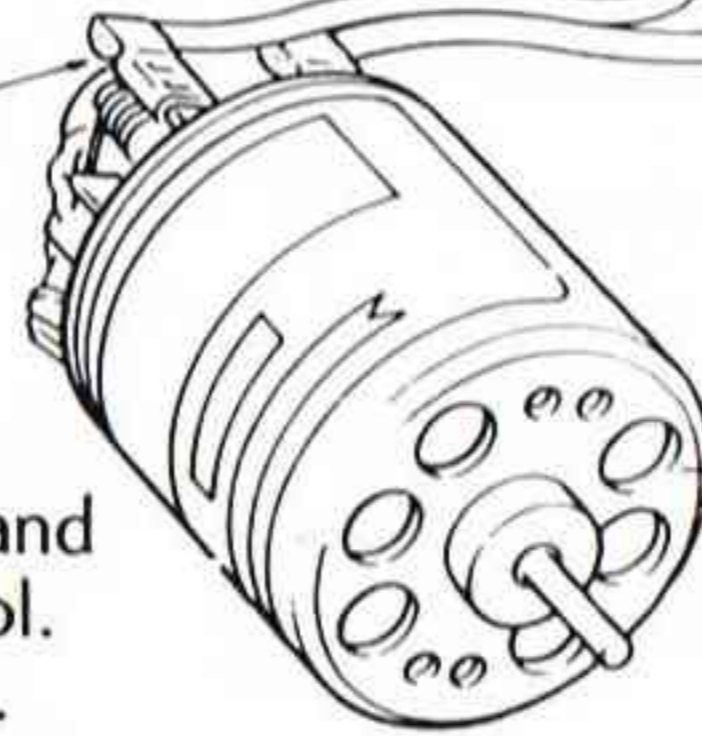
Set the speed control on the "N" mark.

Refer to Page 13 Step 28 for wiring.

Hold on to the motor and rotate the speed control. The motor should run.

RESISTORS

Fully charged 7.2V battery pack.



MOTOR



The R/C car is designed for BEC type receiver only.

- **Transmitter** It is a control box that produces a signal according to the stick movement.
- **Receiver** It receives the signal from the transmitter and sends a signal to the servo.
- **Servo** They move the mechanism of the car in accordance with the signal from the receiver.
- **Antenna** The antenna on the transmitter transmits the signal and the receiver antenna receives the signal. Both antennas must be fully extended.
- **Trim Lever** It adjusts the neutral position of the servo and allows fine tuning of the servo position.
- **Battery Meter** It allows you to monitor the battery power.
- **Servo Horn** It transmits the mechanical power of the servo to the control rod.

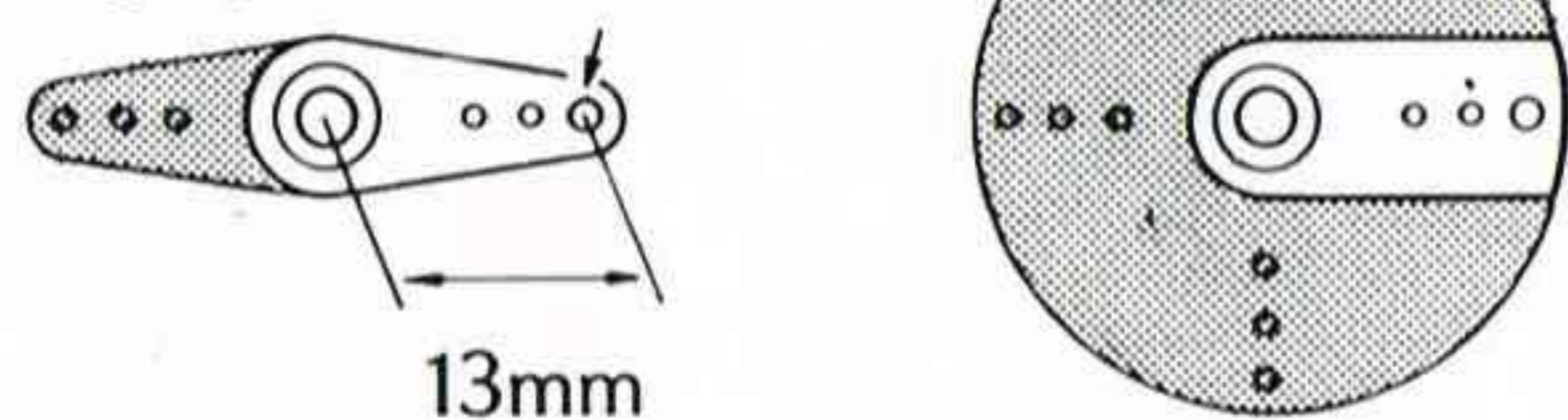
20 ASSEMBLY OF STEERING ROD

- M3 x 8 P/H S/T SCREW2
- M3 WASHER2
- 75 BALL END (S)1
- 85 STEERING ROD1

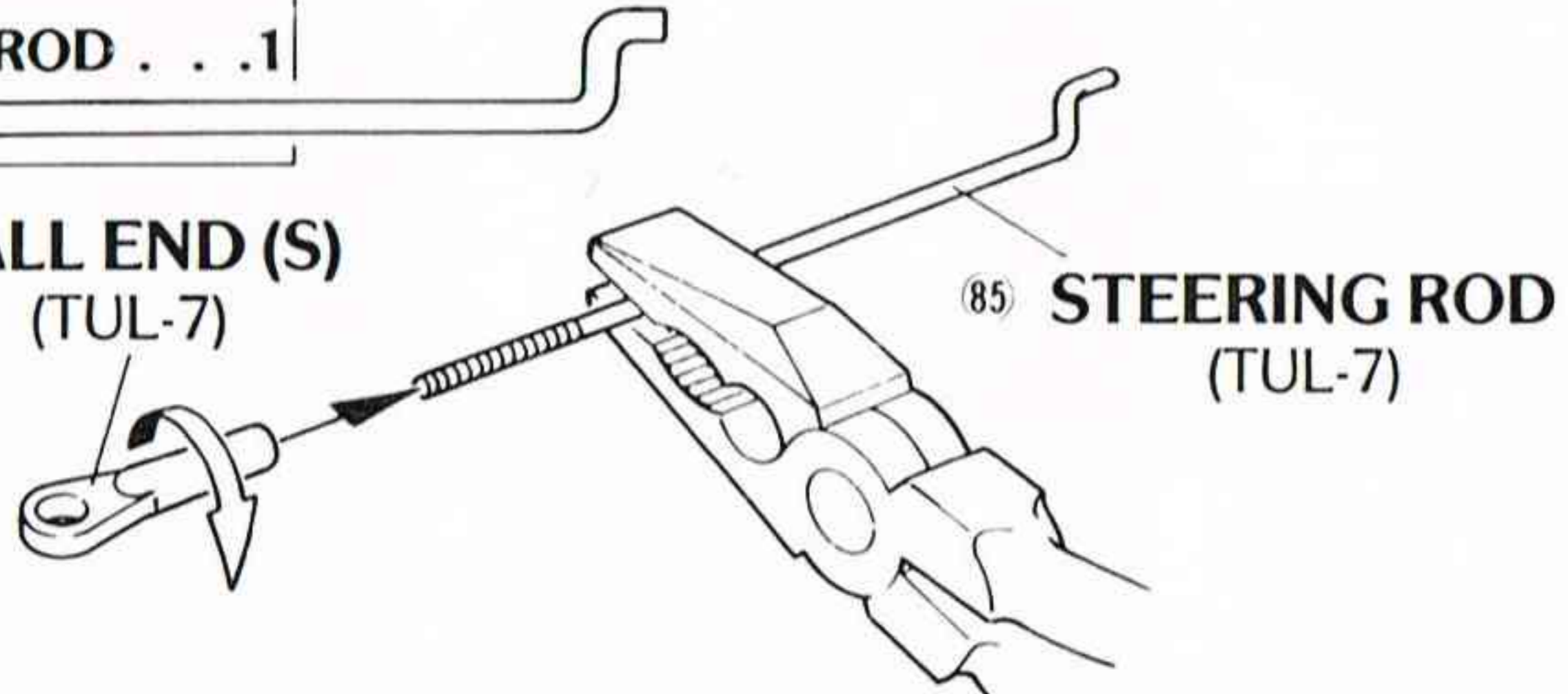
Step 1

Remove the unnecessary (shaded) portion of the servo arm/wheel to obtain the proper shape needed.

This hole may need to be enlarged slightly with an awl.



Step 2

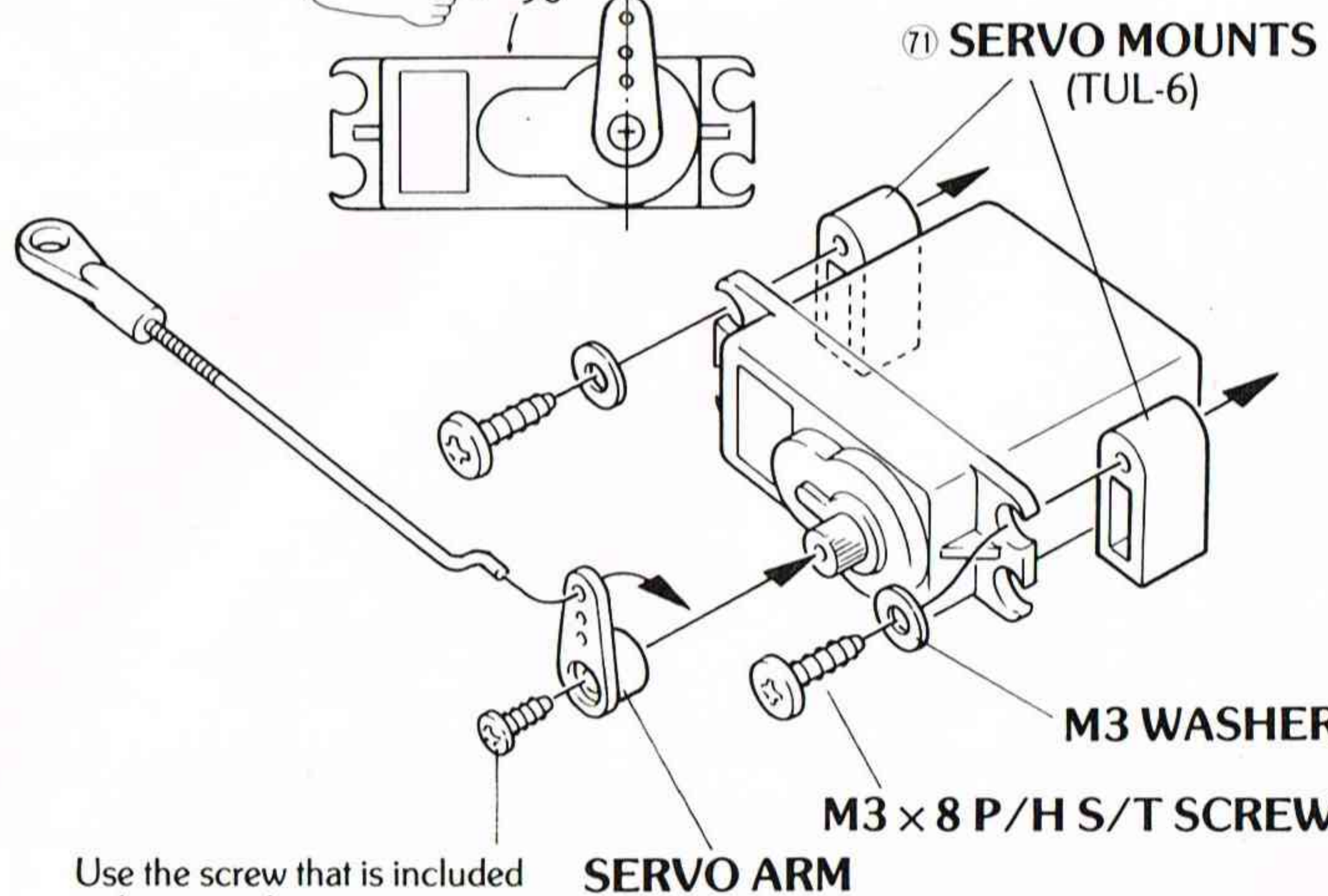


Step 3

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



71 SERVO MOUNTS (TUL-6)



Use the screw that is included with your radio.

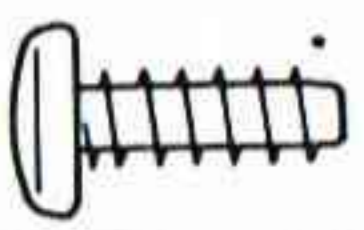
SERVO ARM

21 INSTALLATION OF STEERING SERVO

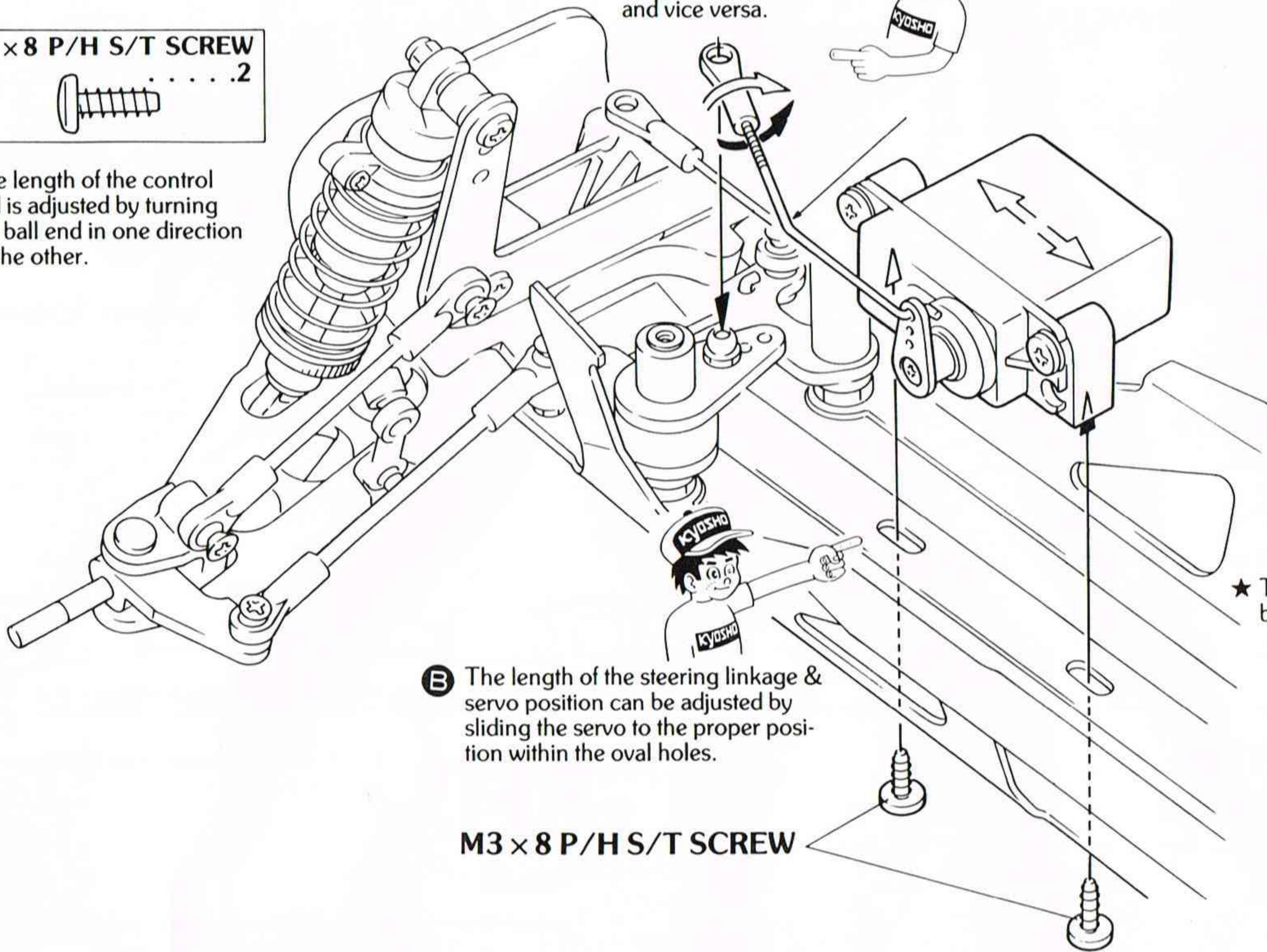
A In this view, turning the ball clockwise will lengthen the control rod and vice versa.



M3 x 8 P/H S/T SCREW2



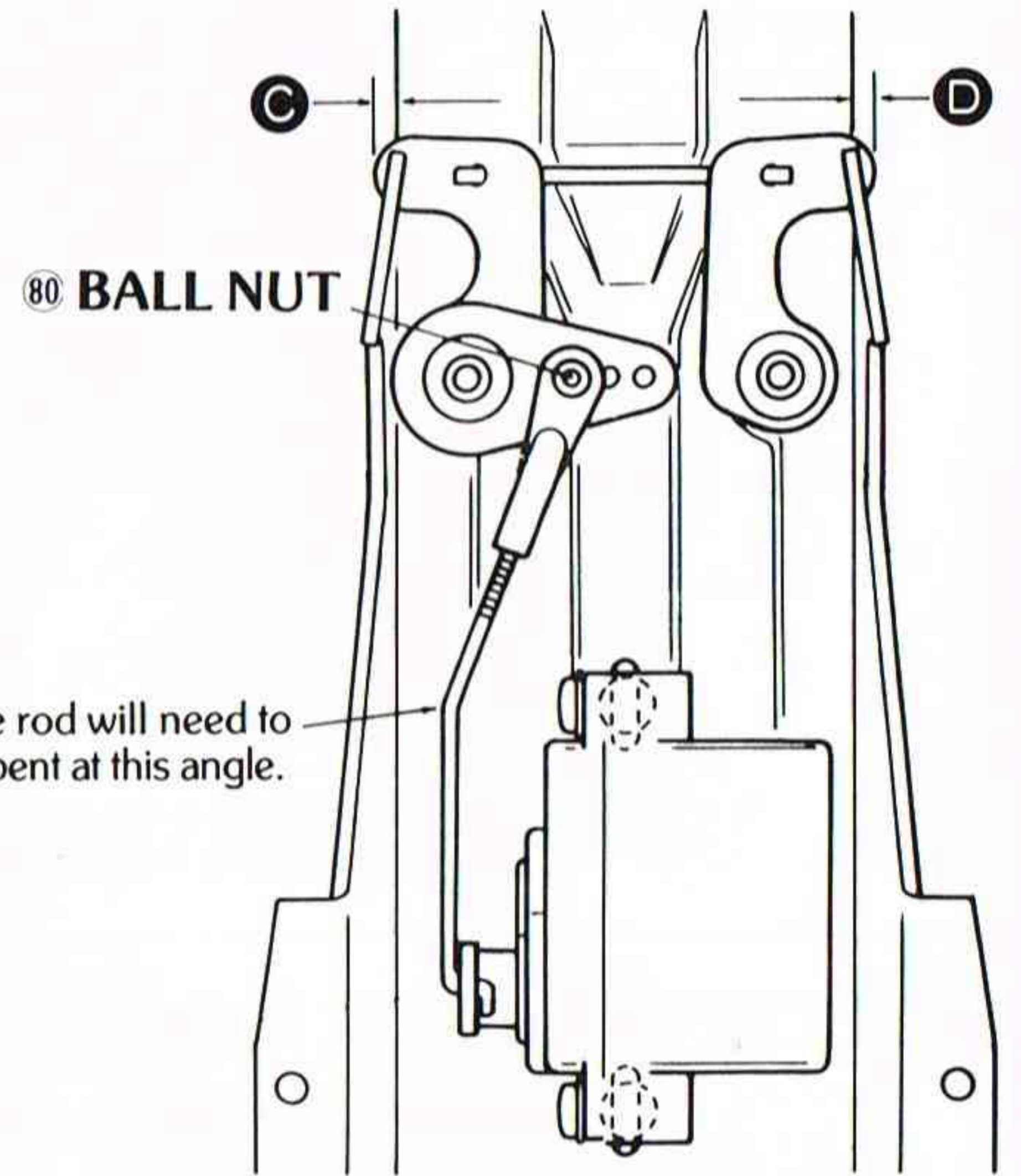
The length of the control rod is adjusted by turning the ball end in one direction or the other.



B The length of the steering linkage & servo position can be adjusted by sliding the servo to the proper position within the oval holes.

M3 x 8 P/H S/T SCREW

The control rod should be adjusted so that the distances **C** & **D** are equal when the servo is in the neutral position.



★ The rod will need to be bent at this angle.

22 ASSEMBLY OF RADIO PLATE



The body mounting post needs to be parallel with the radio plate.

Step 1

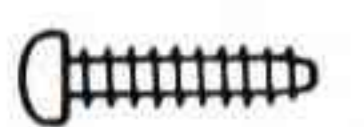
72 BODY MOUNT POST (TUL-6)

36 WING POST (TUL-4)

73 ANTENNA POST (TUL-6)

11 RADIO PLATE (TUL-2)

M2 x 8 S/T SCREW . . . 1



M2.6 x 6 P/H S/T SCREW1



M3 x 8 P/H S/T SCREW1



M3 x 6 P/H SCREW . . . 2



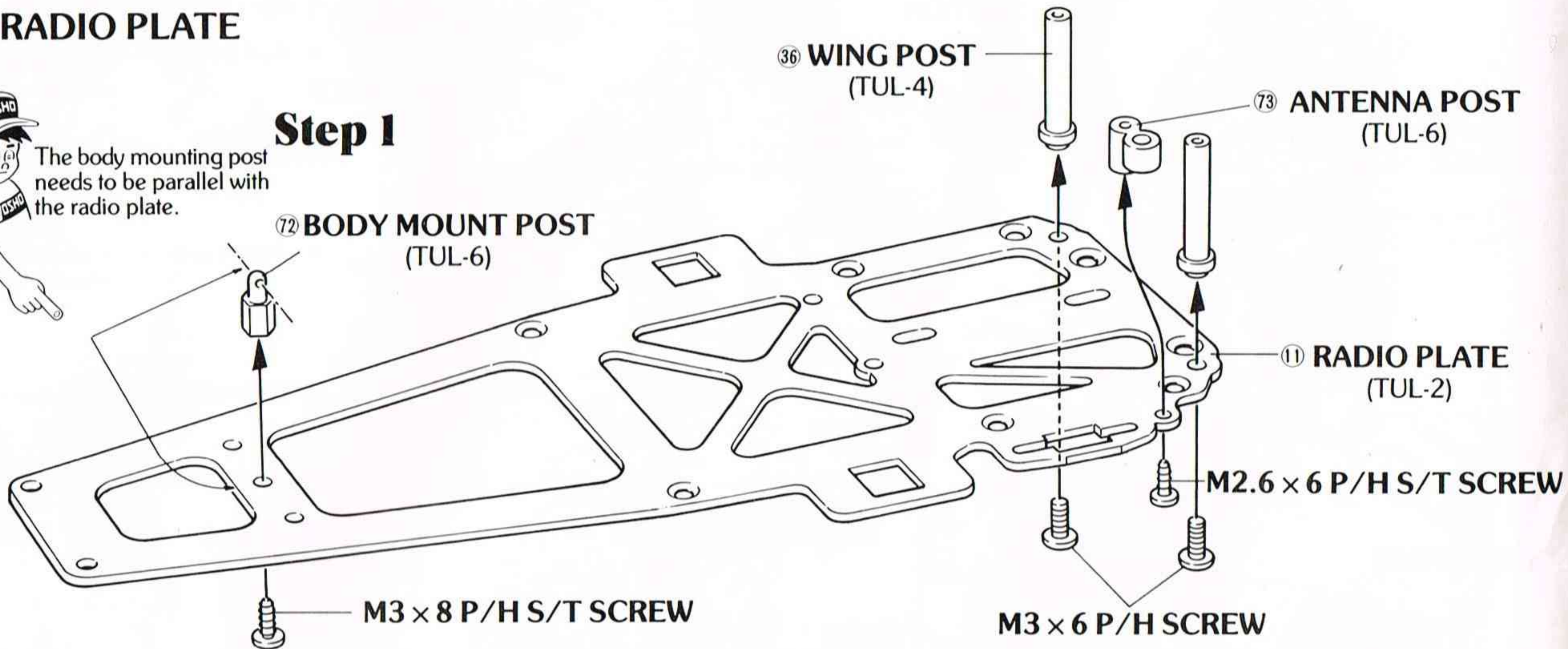
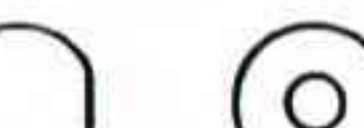
M3 x 10 SCREW2



M3 NUT2



82 4.8mm BALL1



M3 x 8 P/H S/T SCREW

M3 x 6 P/H SCREW

M2.6 x 6 P/H S/T SCREW

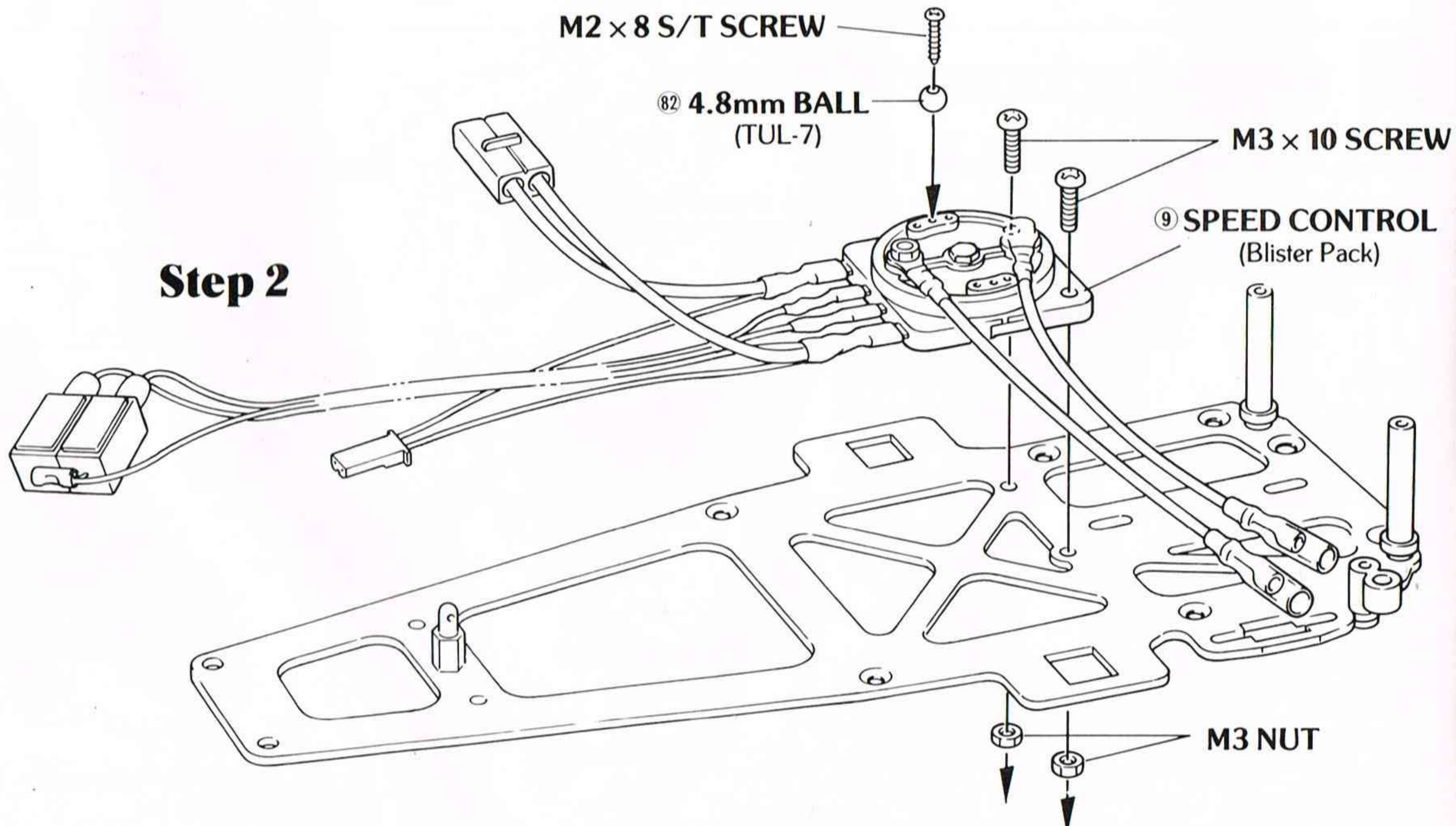
Step 2

M2 x 8 S/T SCREW

82 4.8mm BALL (TUL-7)

M3 x 10 SCREW

9 SPEED CONTROL (Blister Pack)

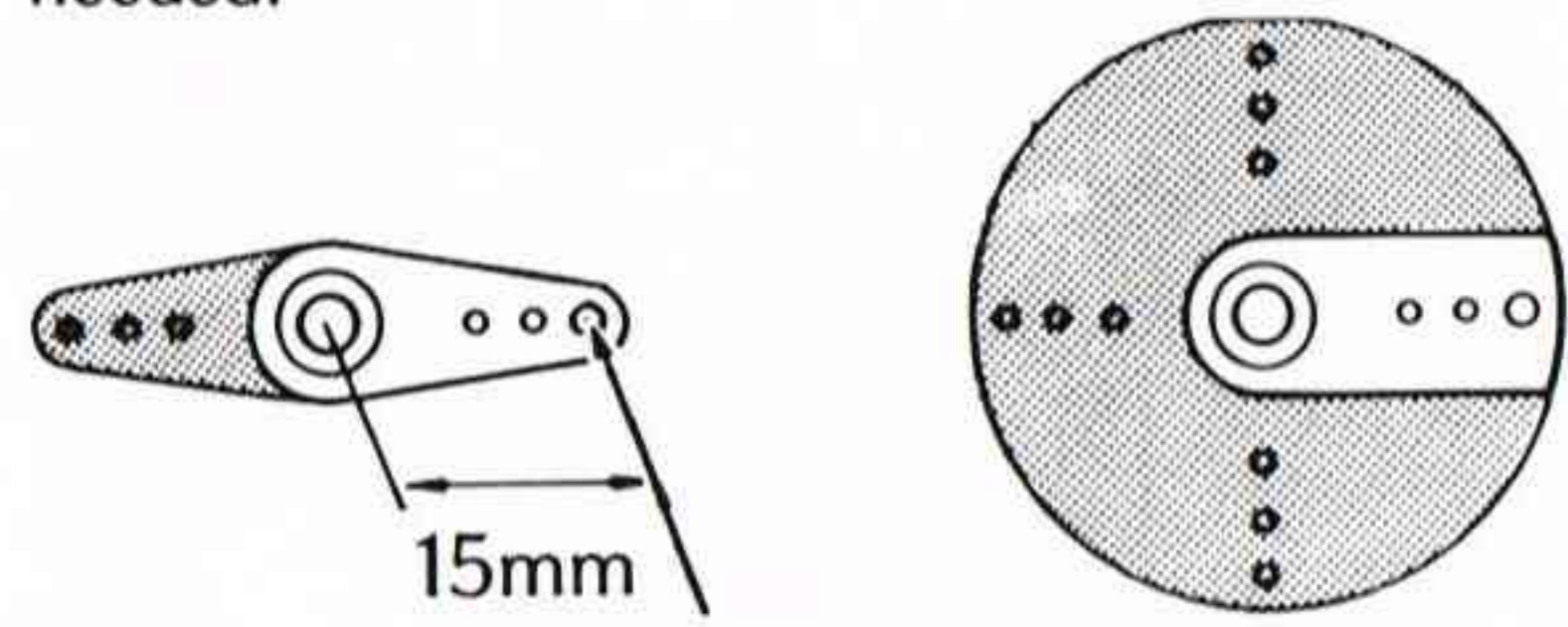


M3 NUT

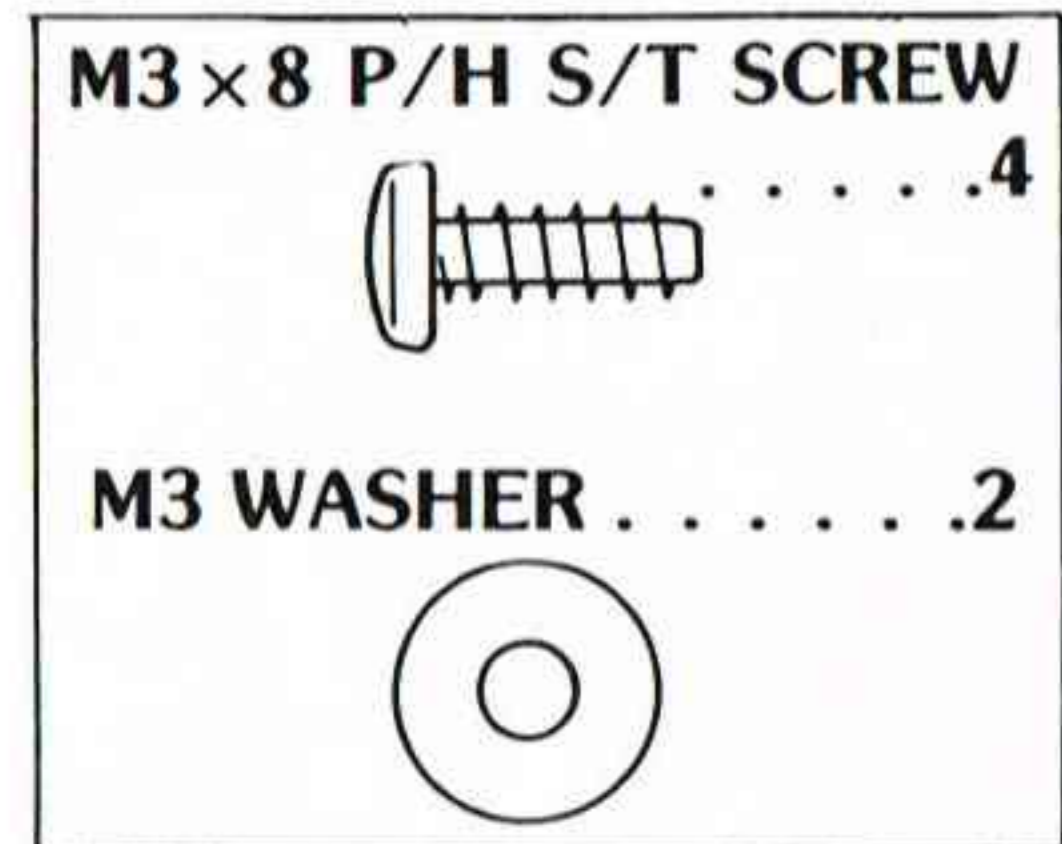
23 SPEED CONTROL SERVO INSTALLATION

Step 1

Remove the unnecessary (shaded) portion of the servo arm/wheel to obtain the proper shape needed.



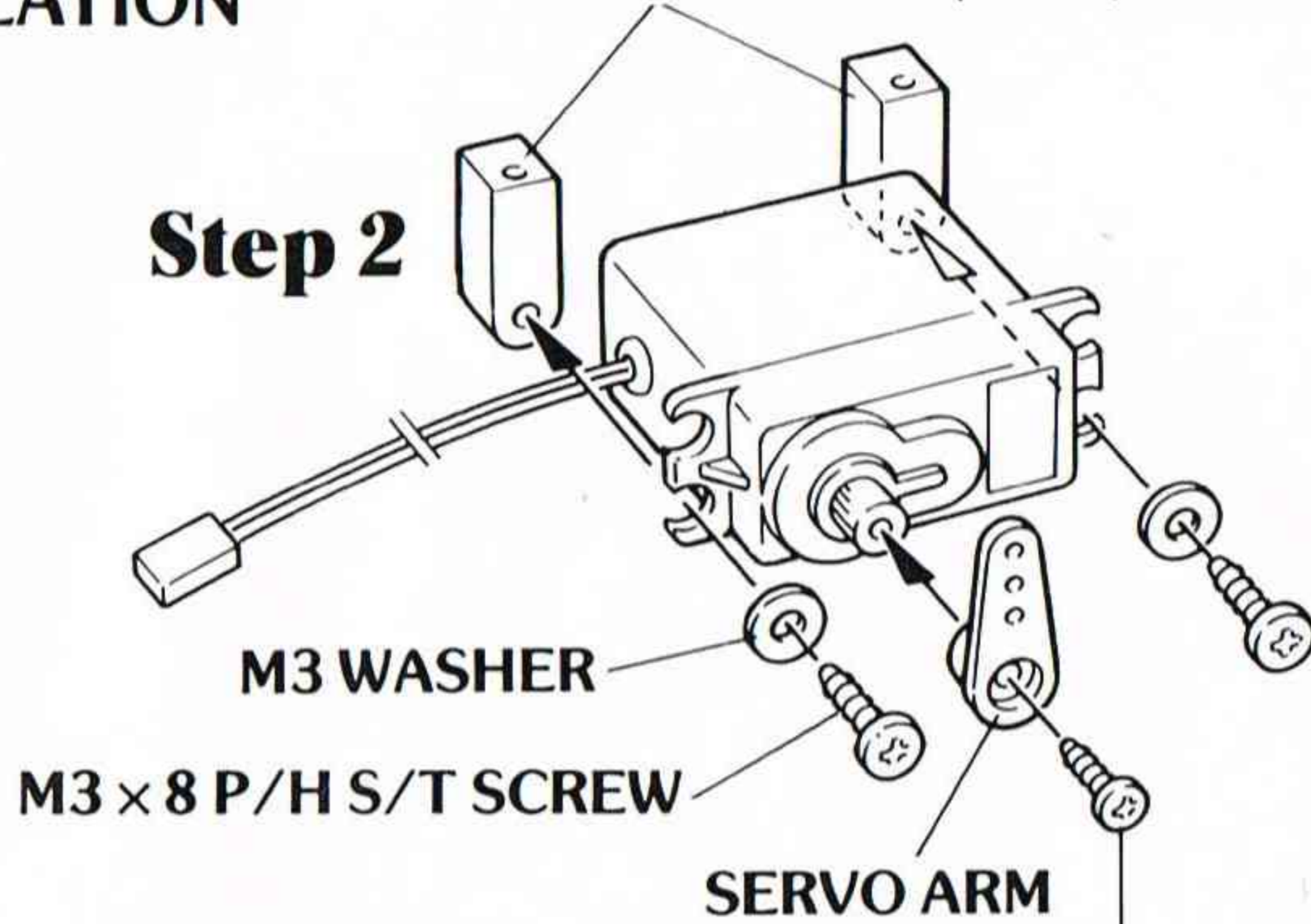
This hole may have to be enlarged slightly with an awl.



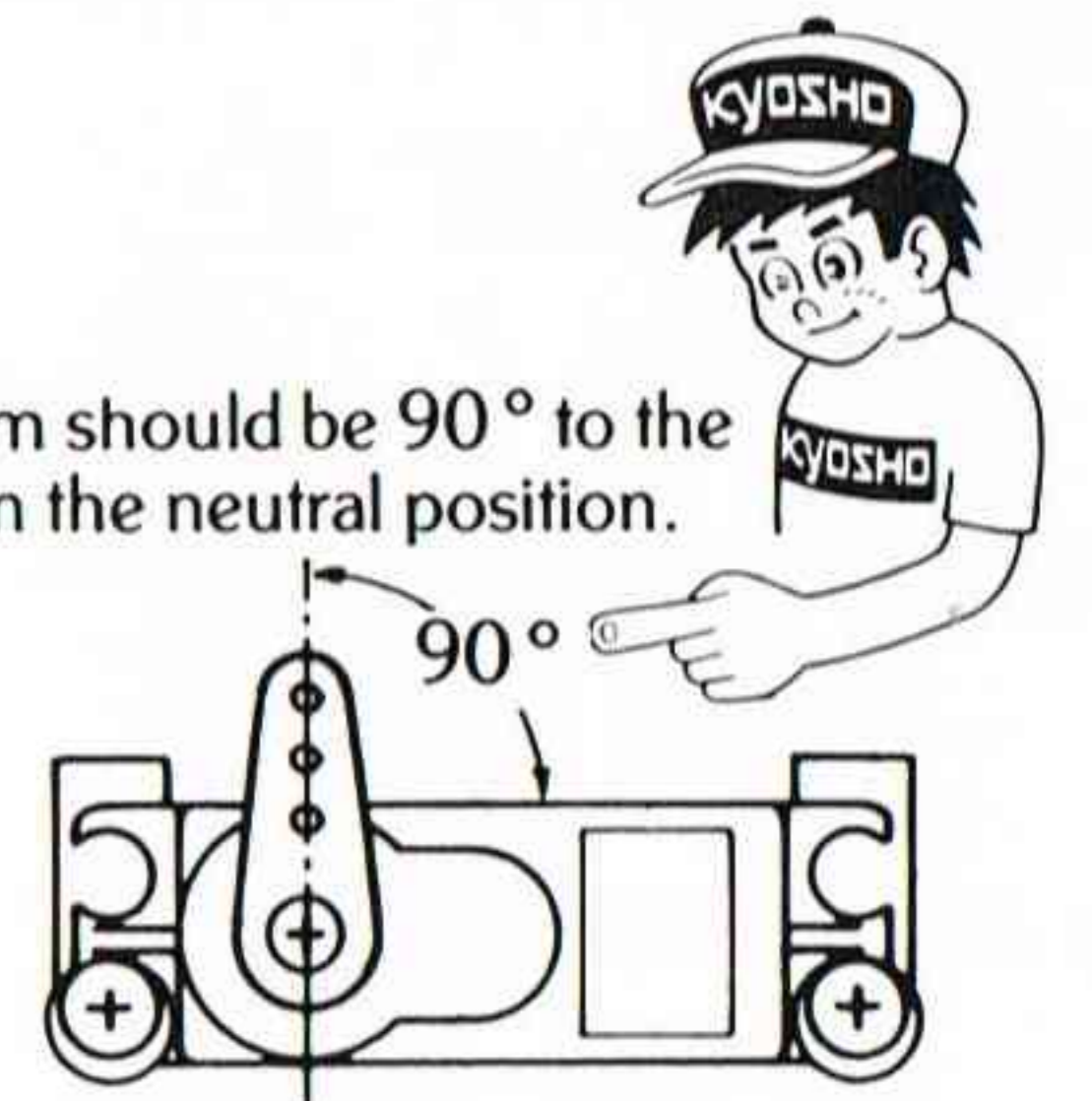
This R/C car is designed to be used with a BEC type radio. If your receiver is not a BEC type a voltage regulator will need to be obtained from your radio manufacturer.

71 SERVO MOUNTS (TUL-6)

Step 2

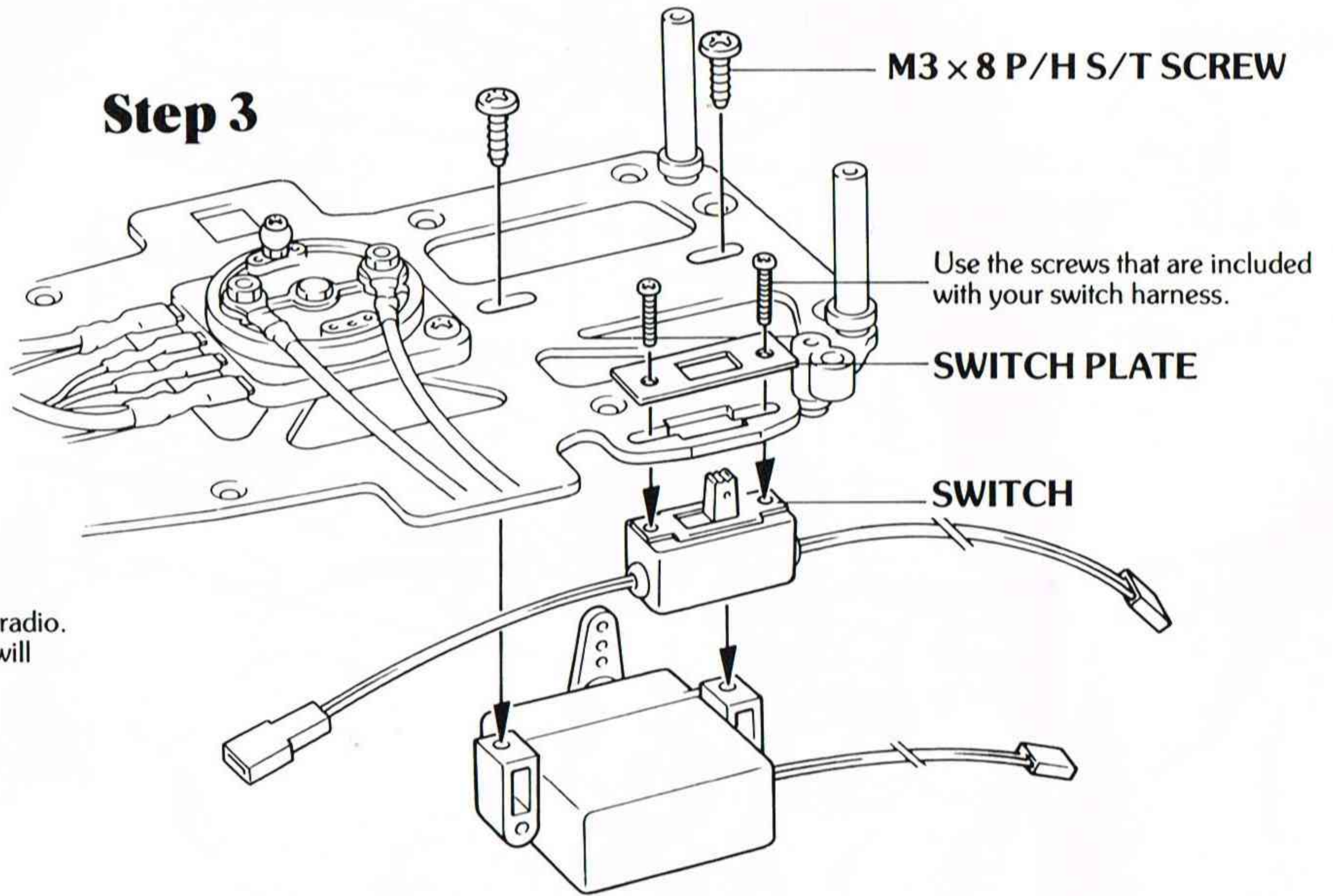


The servo arm should be 90° to the servo when in the neutral position.



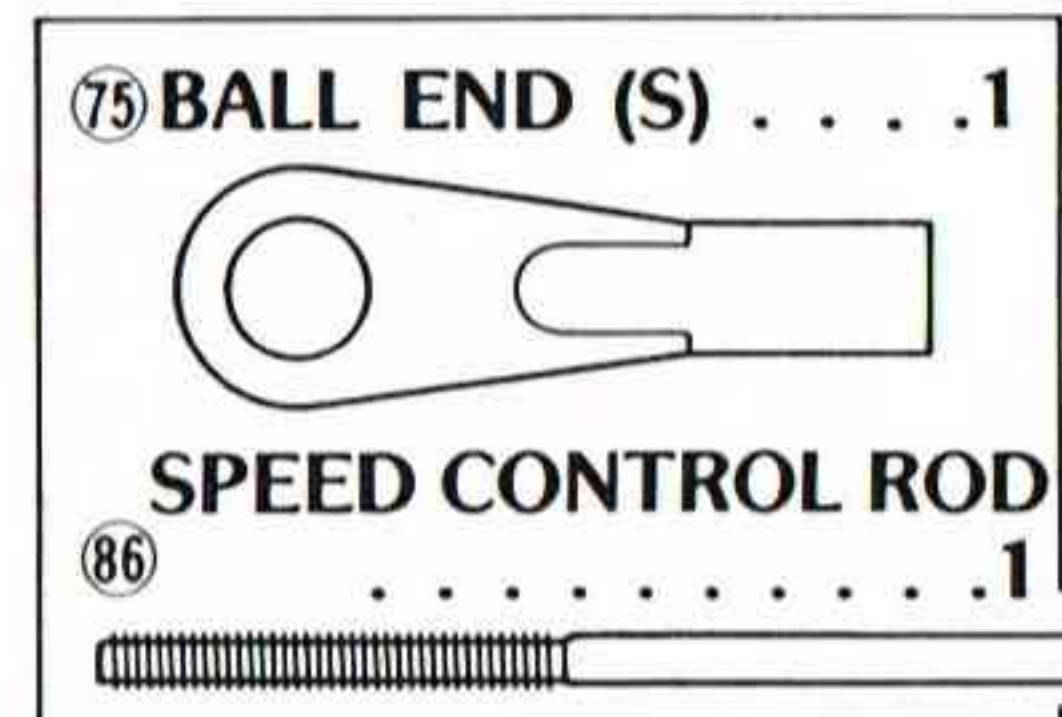
Use the screw that is included with your radio.

Step 3



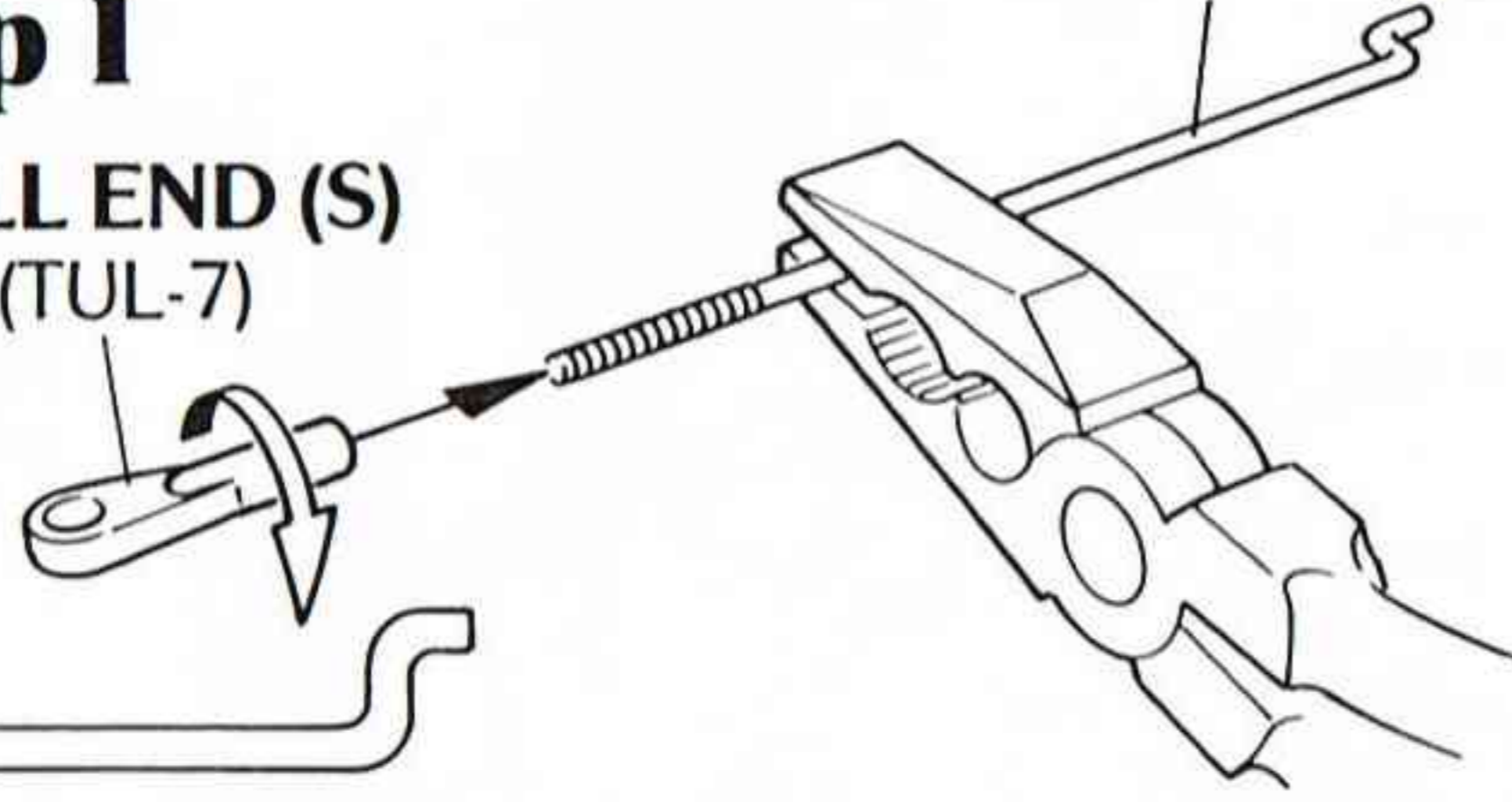
24 SPEED CONTROL ROD ASSEMBLY

Step 1



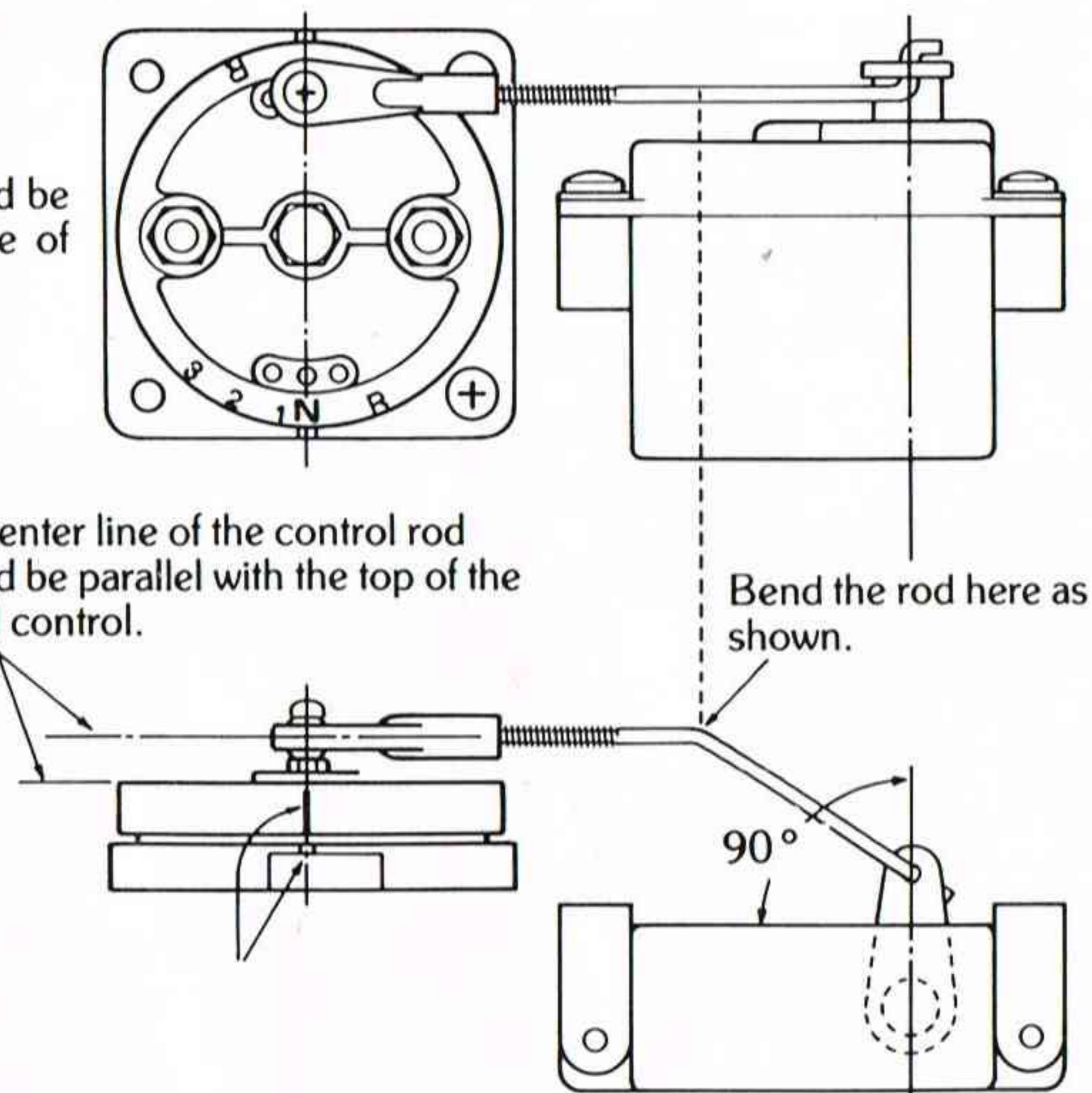
75 BALL END (S) (TUL-7)

86 SPEED CONTROL ROD (TUL-7)



The control rod should be 90° to the center line of the speed control.

The center line of the control rod should be parallel with the top of the speed control.



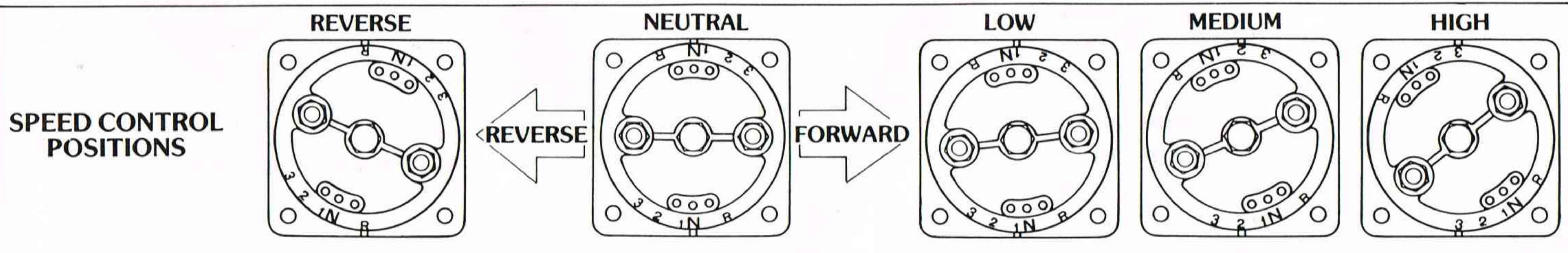
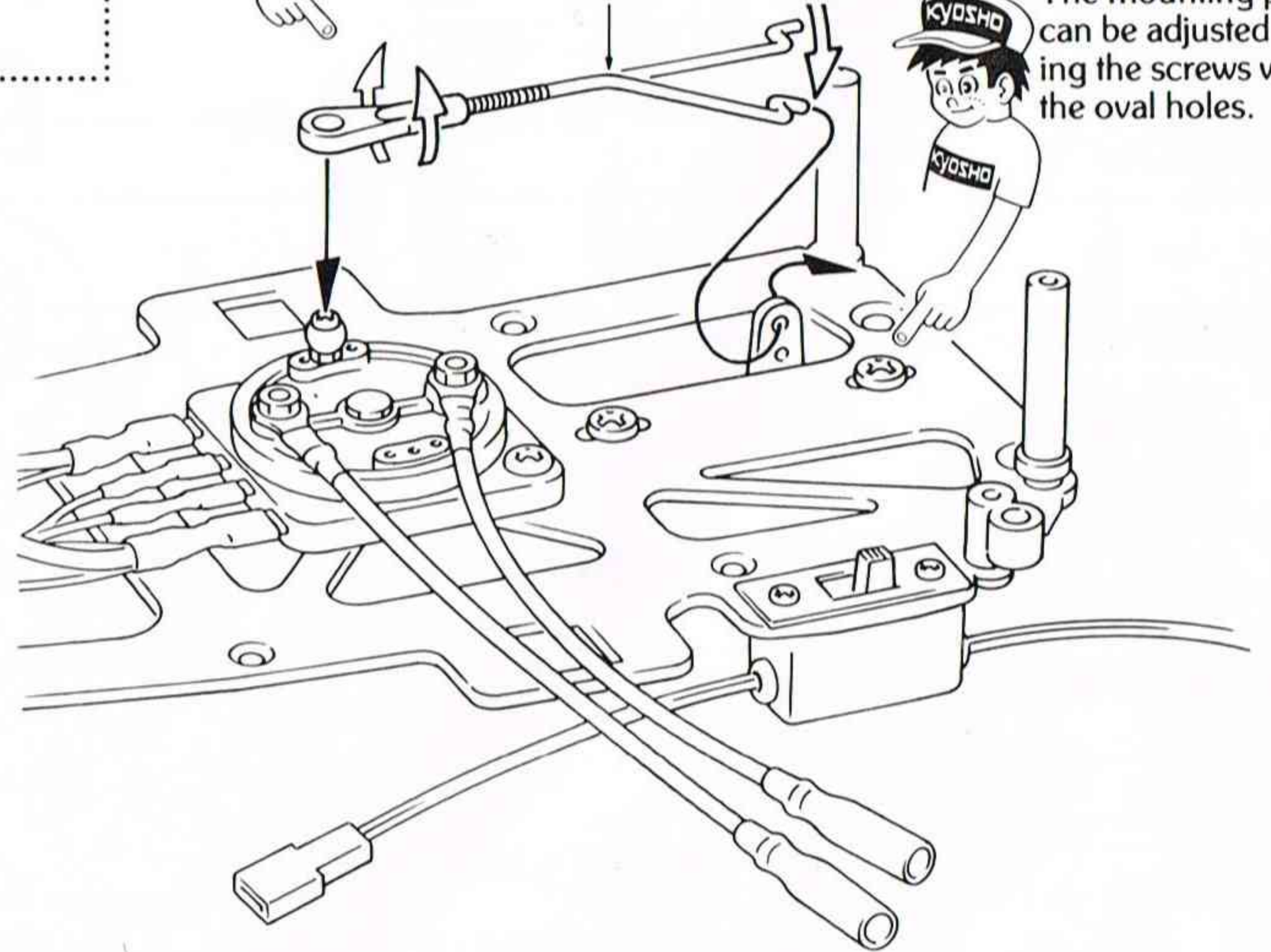
Step 2 Installing the speed control rod:

A The length of the control rod can be adjusted by turning the ball end in the appropriate direction.



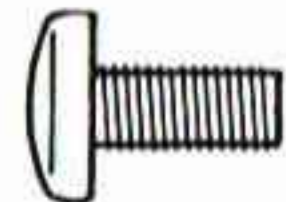
Bend the rod down as shown.

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

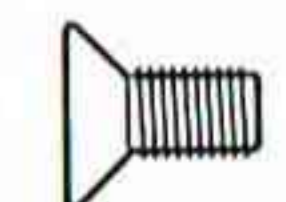


25 INSTALLATION OF RADIO PLATE

M3×6 P/H SCREW . . . 2



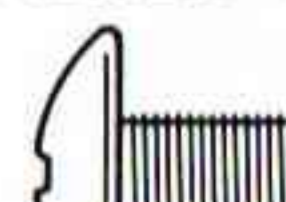
M3×6 F/H SCREW . . . 6



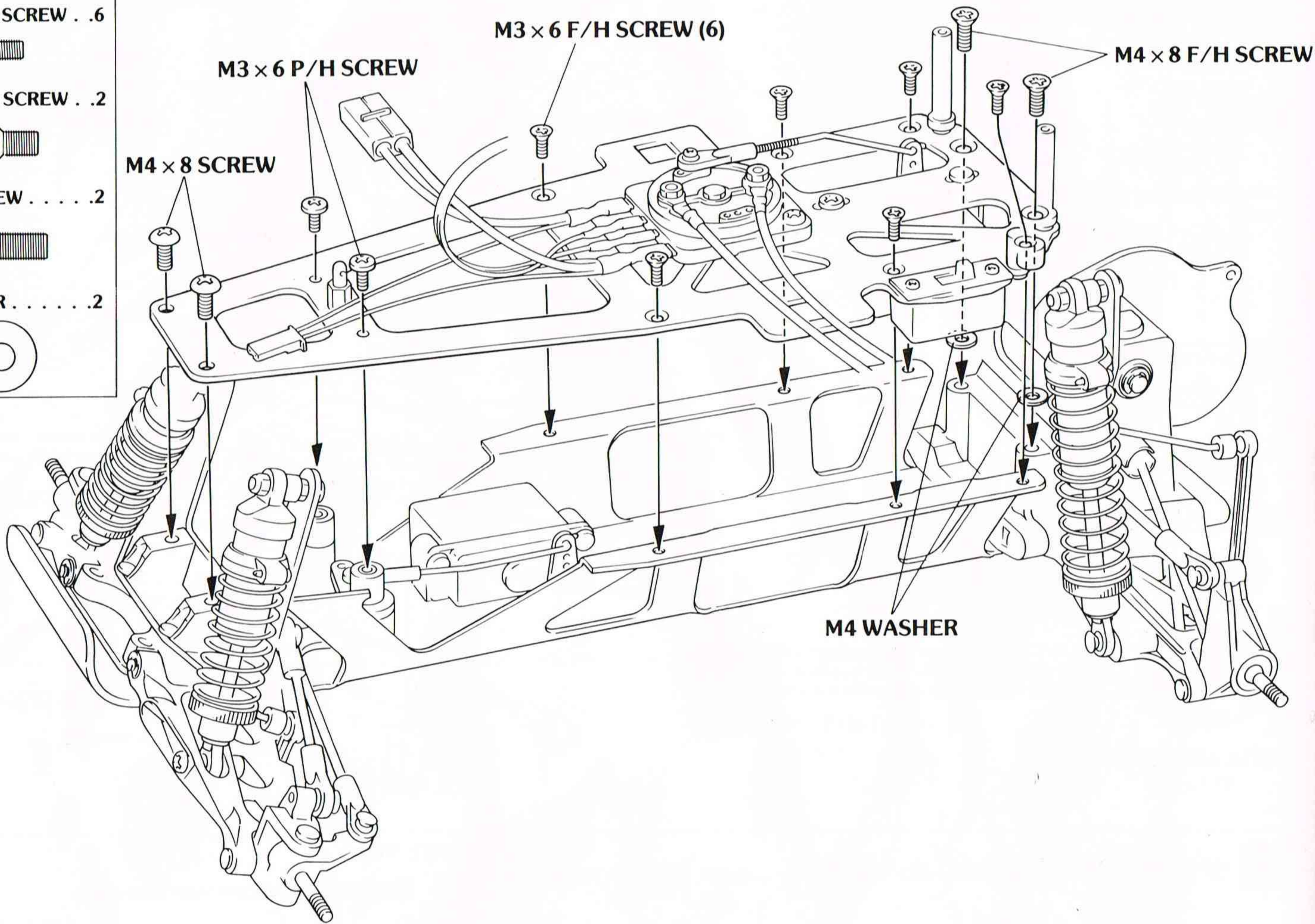
M4×8 F/H SCREW . . . 2



M4×8 SCREW 2

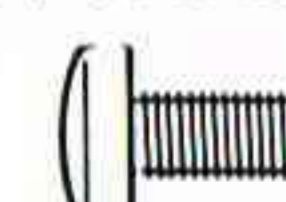


M4 WASHER 2



26 INSTALLATION OF SPEED CONTROL RESISTOR

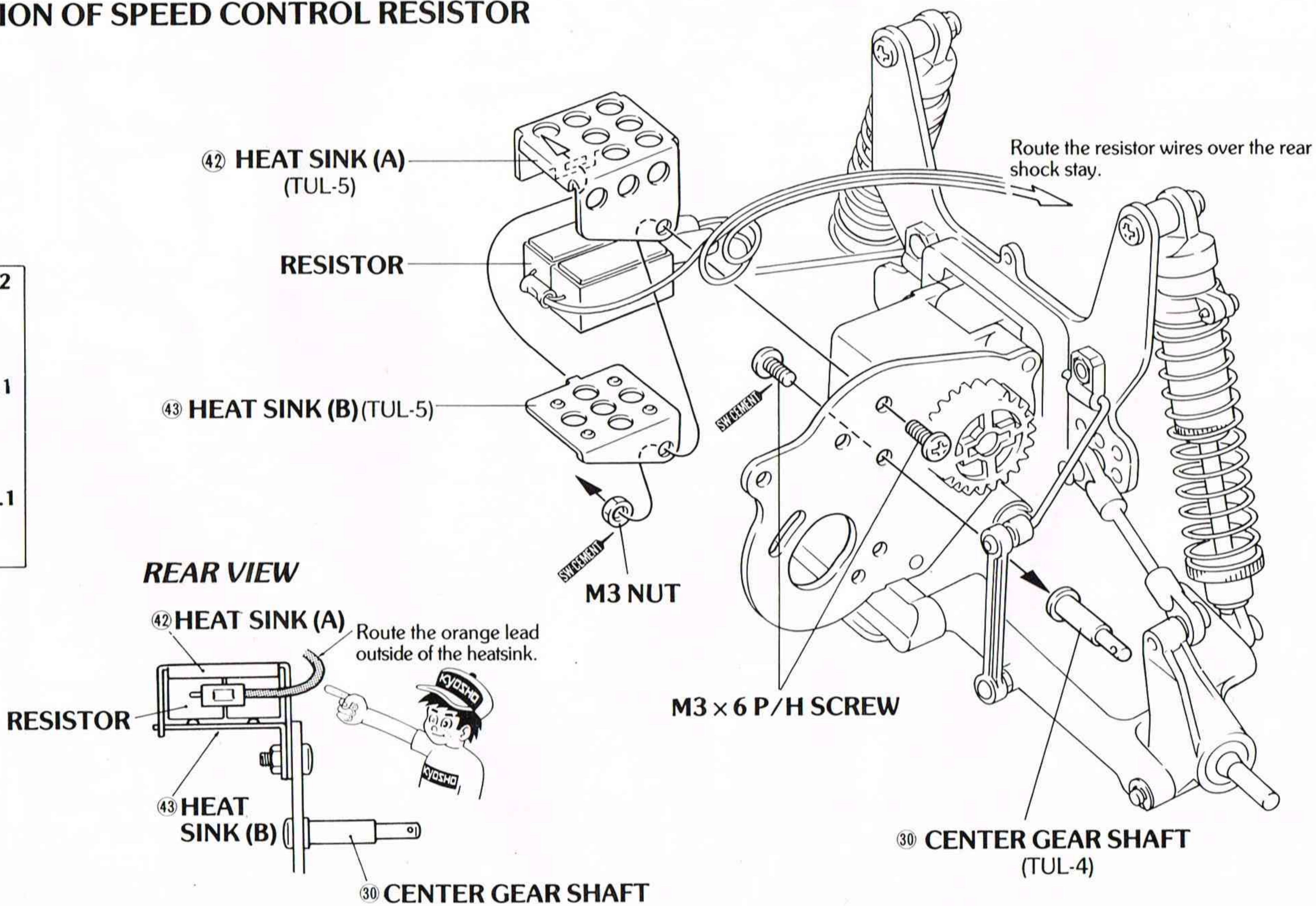
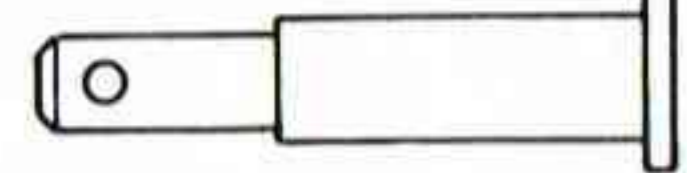
M3×6 P/H SCREW . . . 2



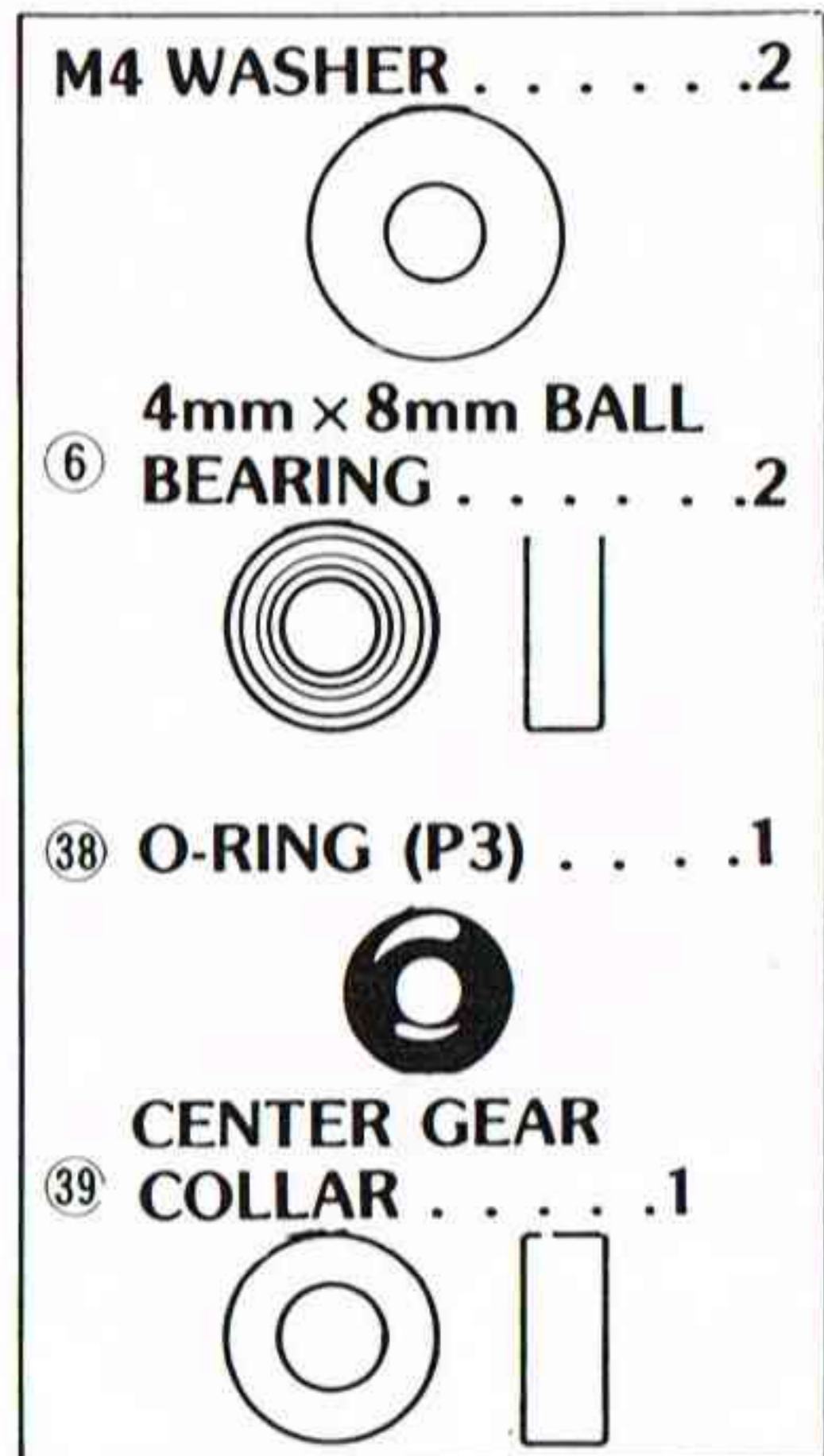
M3 NUT 1



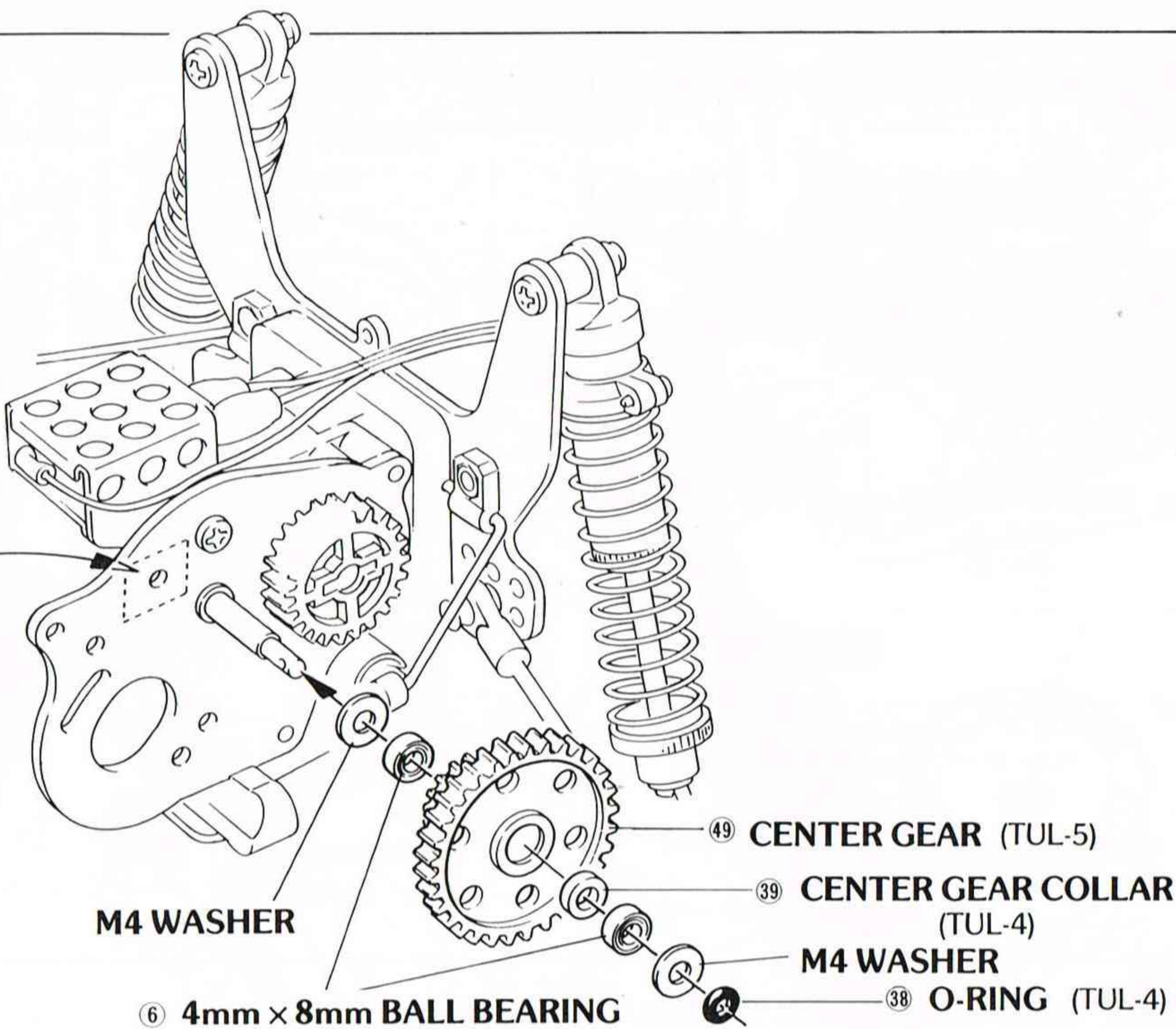
30 CENTER GEAR SHAFT 1



27 INSTALLATION OF CENTER GEAR

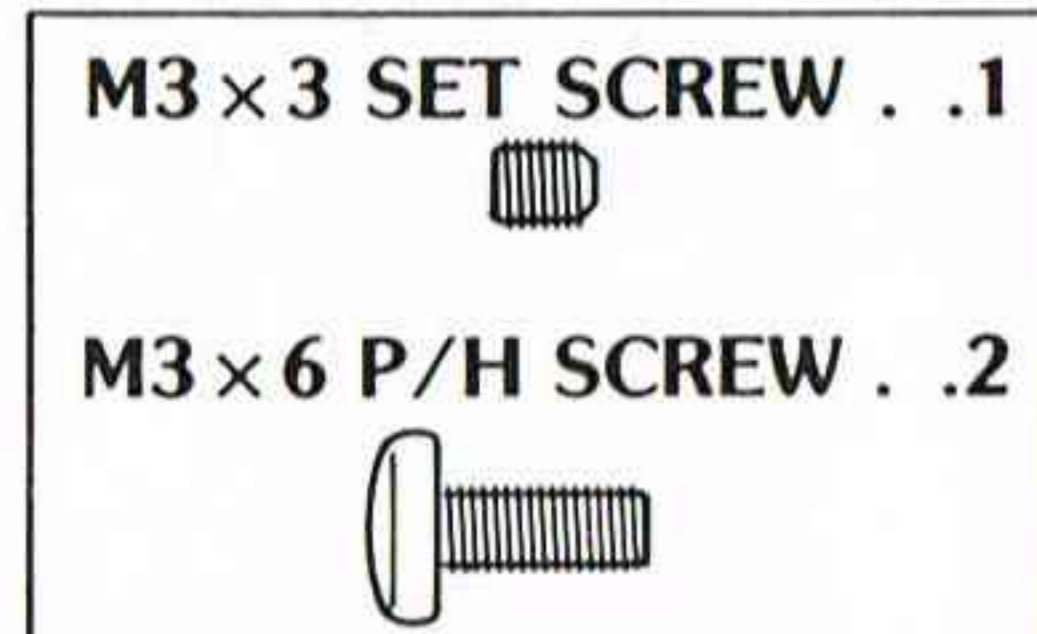
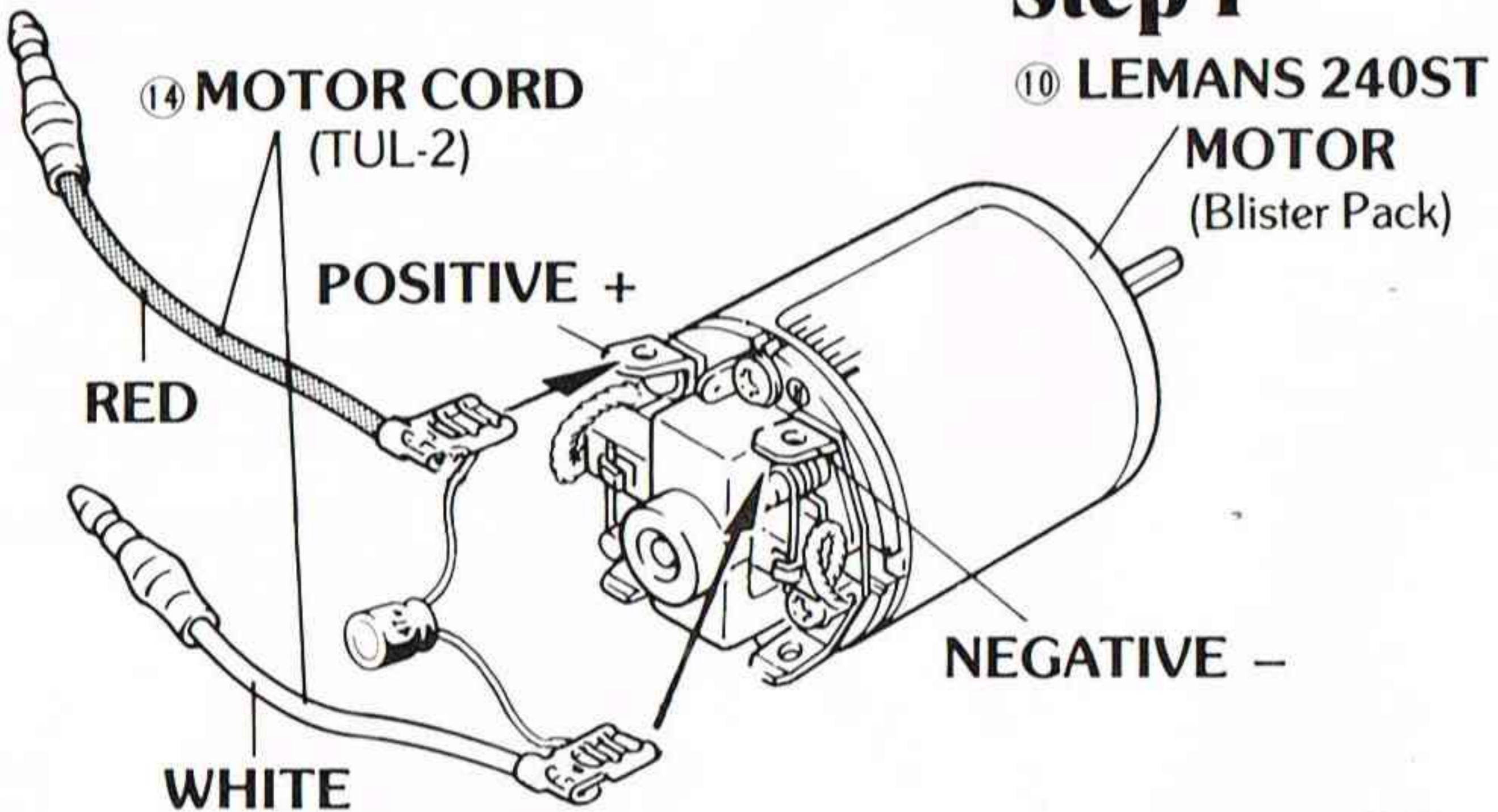


This particular hole is used for mounting the optional motor guard (#UM-28). If you are not mounting the guard at this time simply cover the hole with an extra section of decal sheet which will not be used.



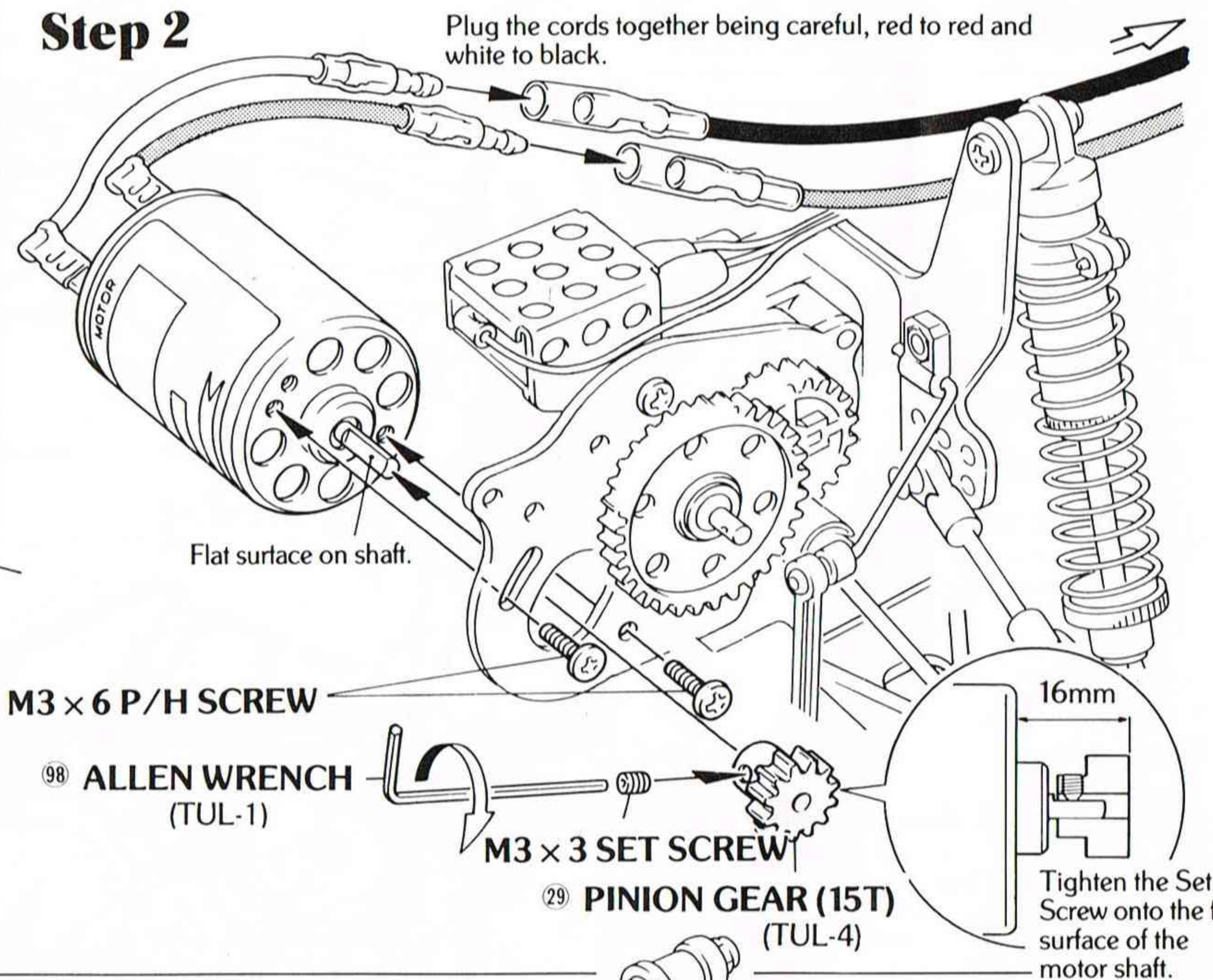
28 INSTALLATION OF MOTOR

Step 1

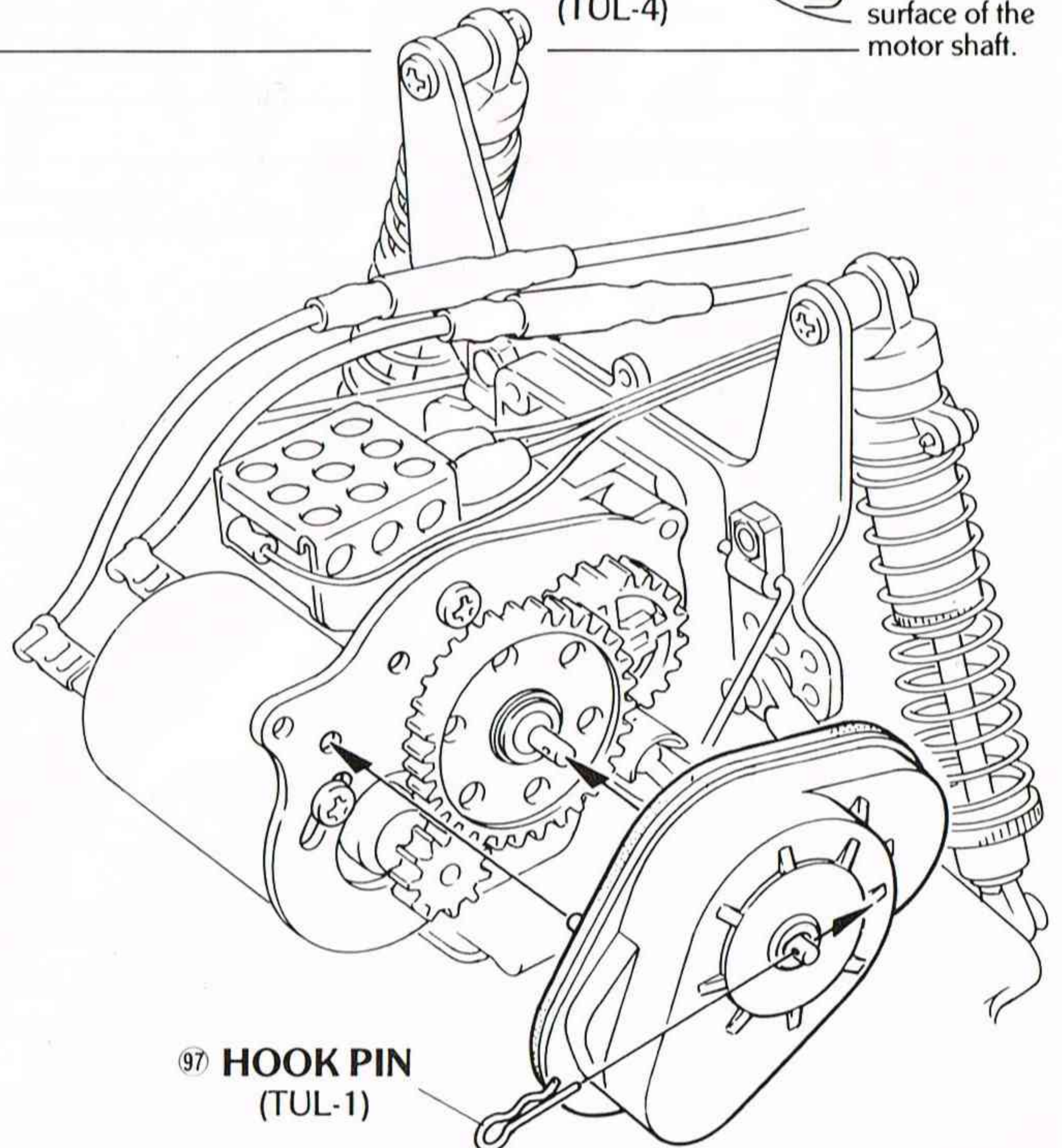
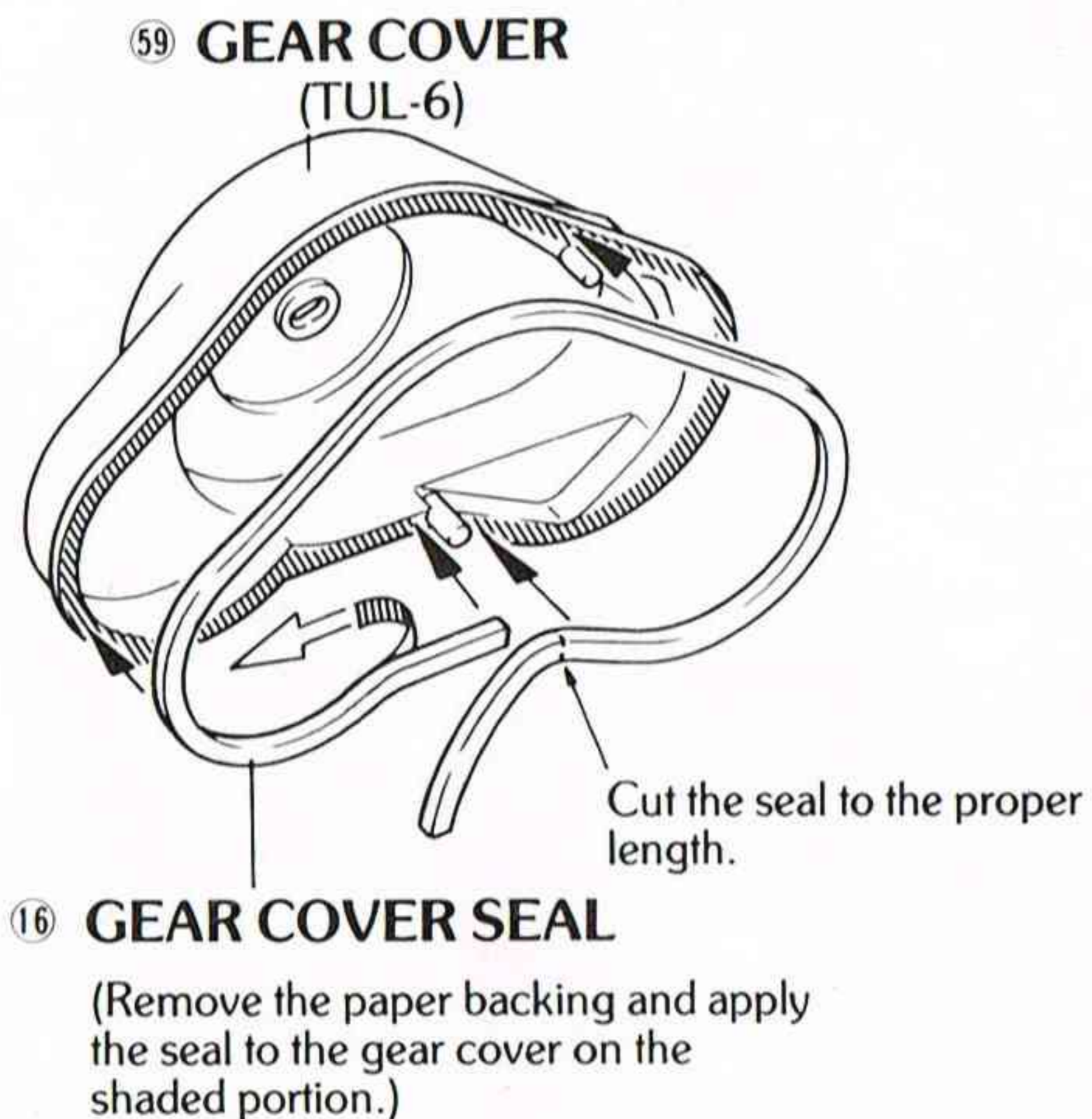
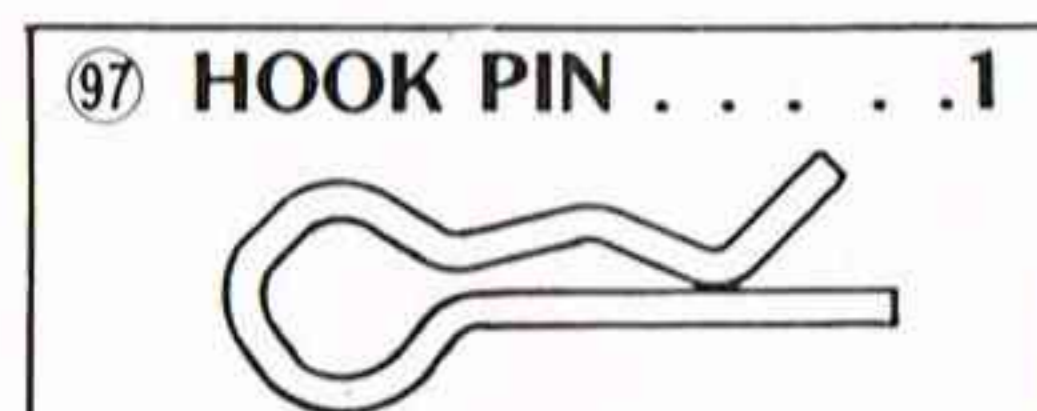


The pinion gear/center gear mesh may be adjusted by loosening these two screws and sliding the motor to the proper position.

Step 2



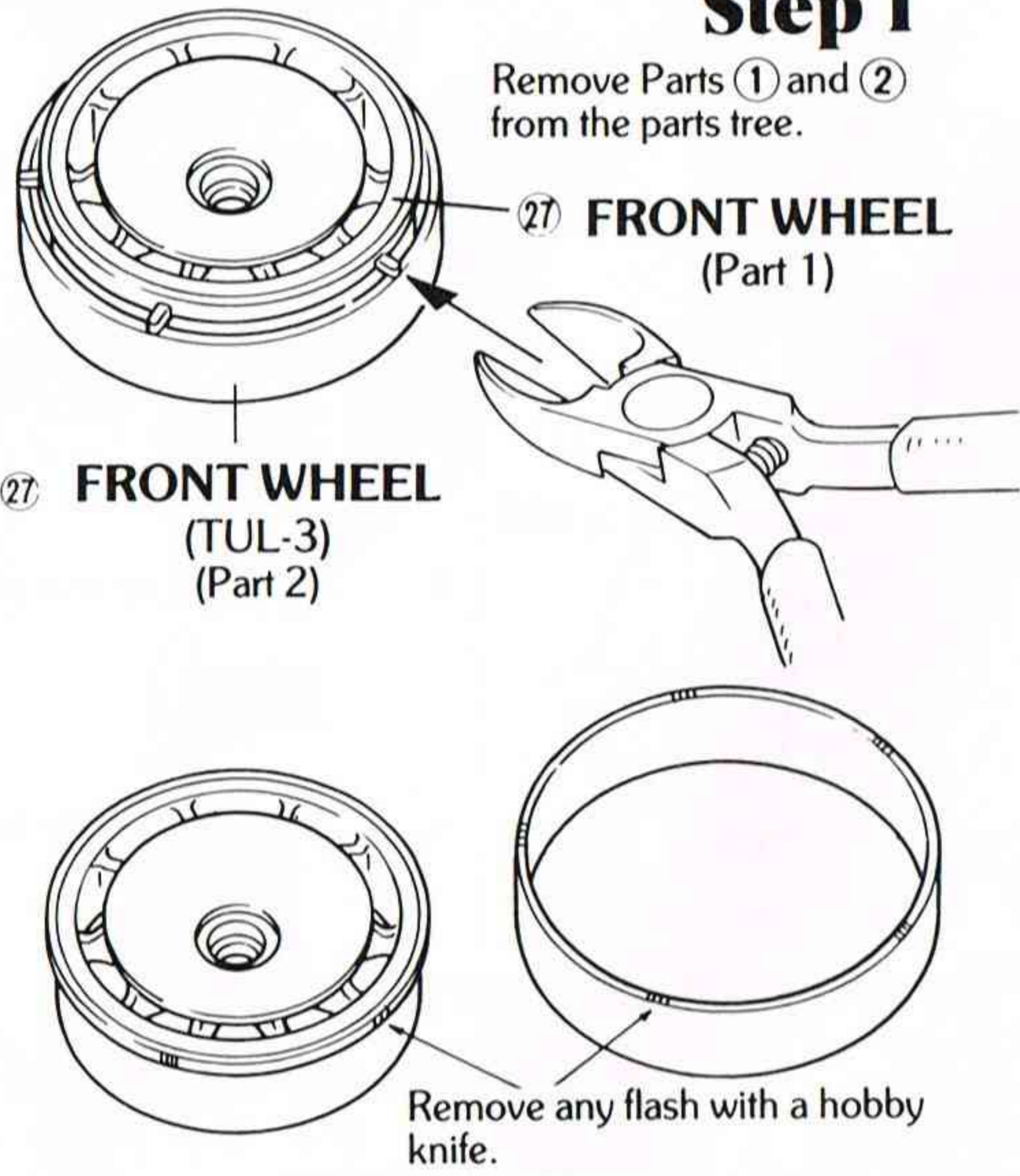
29 INSTALLATION OF GEAR COVER



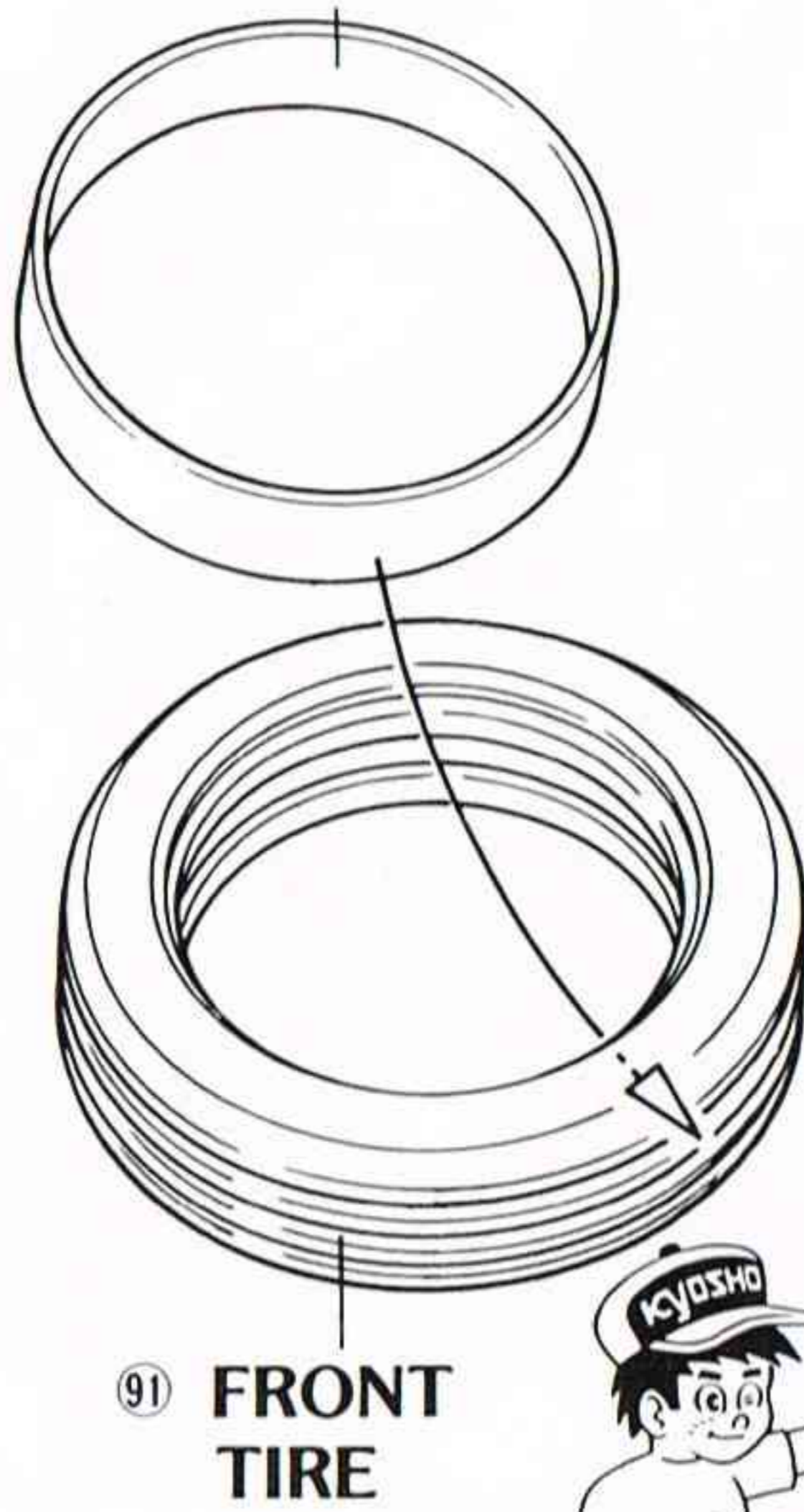
30 ASSEMBLY OF TIRE AND WHEEL

Step 1

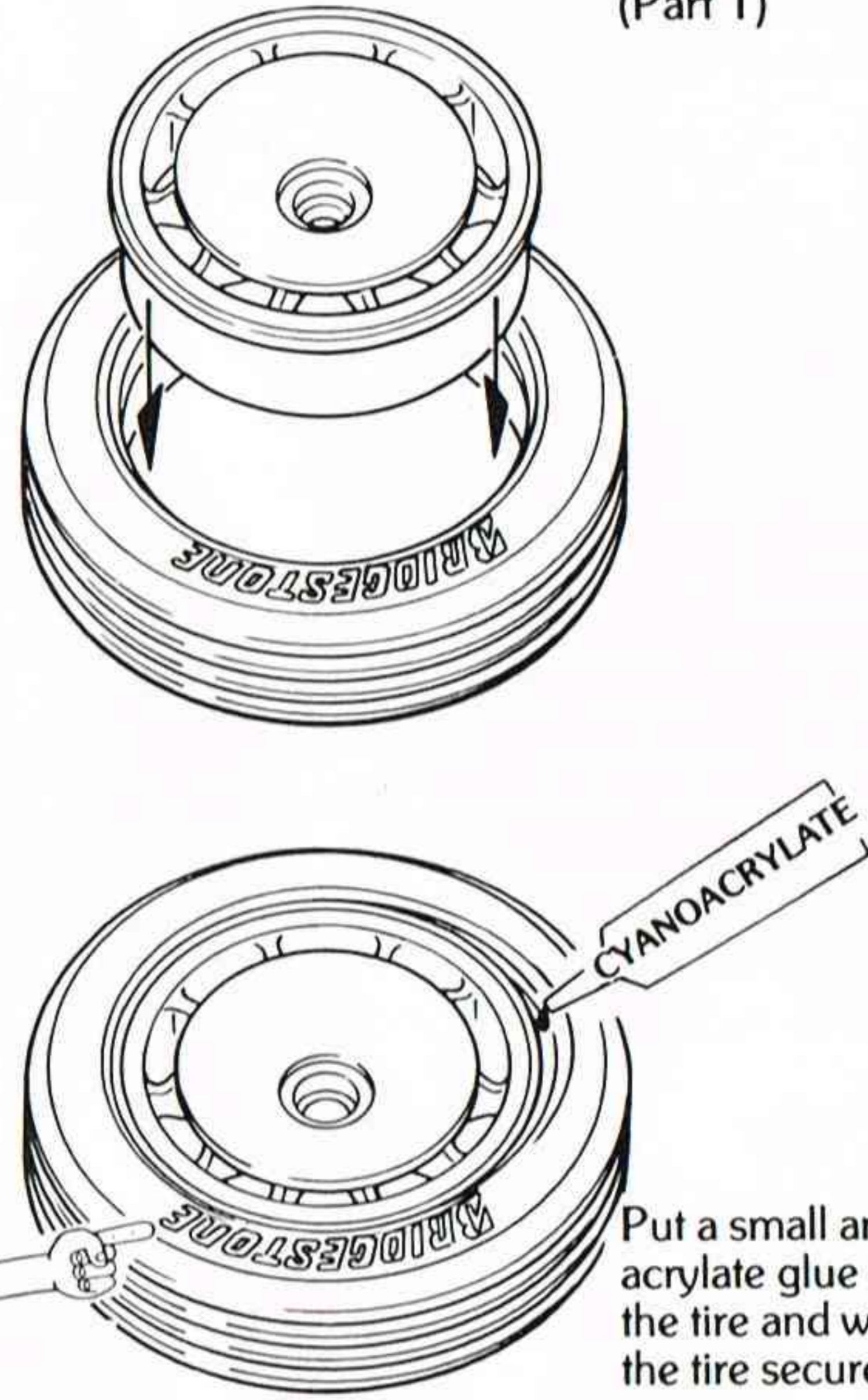
Remove Parts ① and ② from the parts tree.



Step 2 FRONT WHEEL (Part 2)

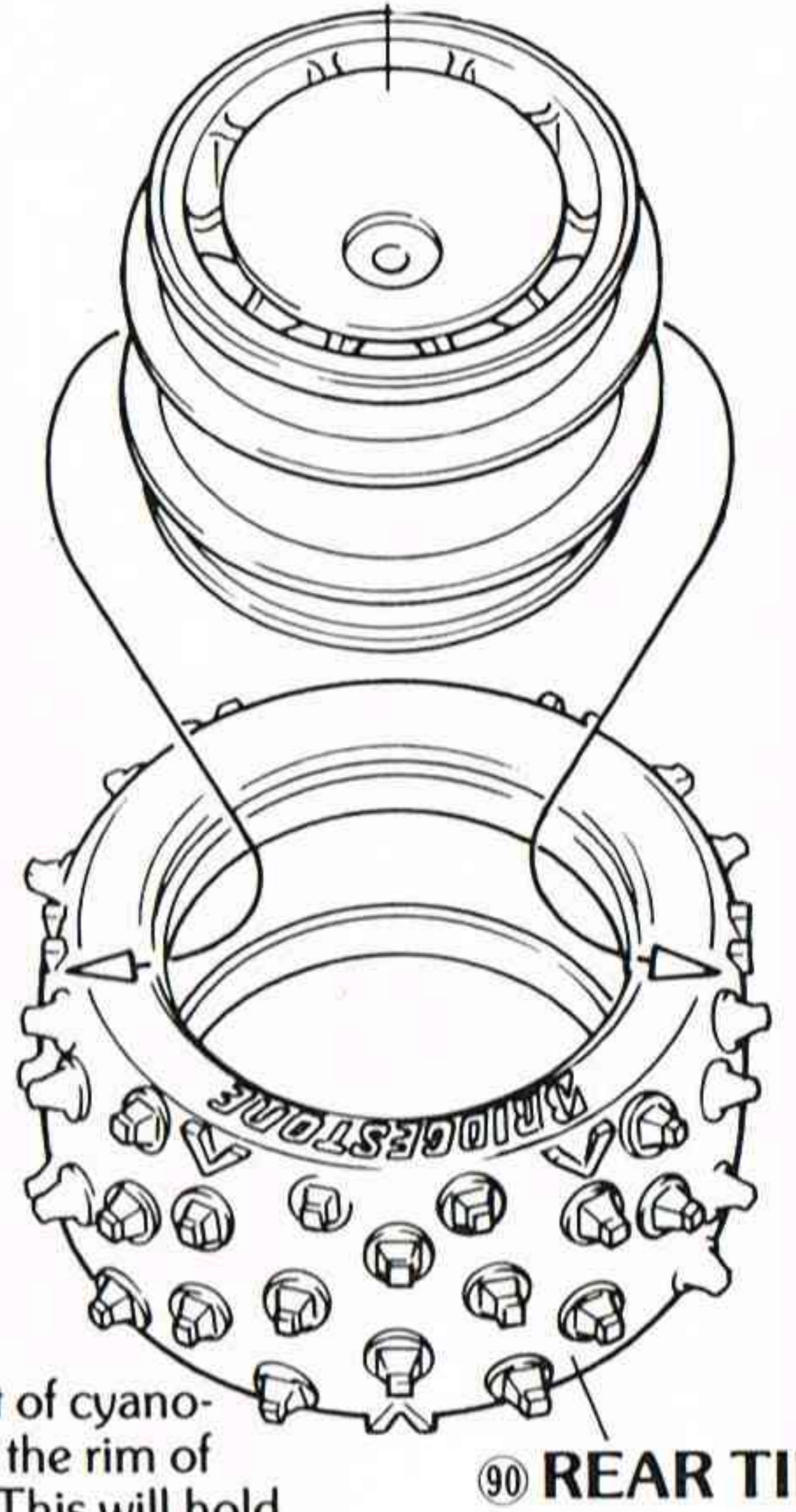


Step 3 FRONT WHEEL (Part 1)



Put a small amount of cyanoacrylate glue along the rim of the tire and wheel. This will hold the tire securely to the wheel.

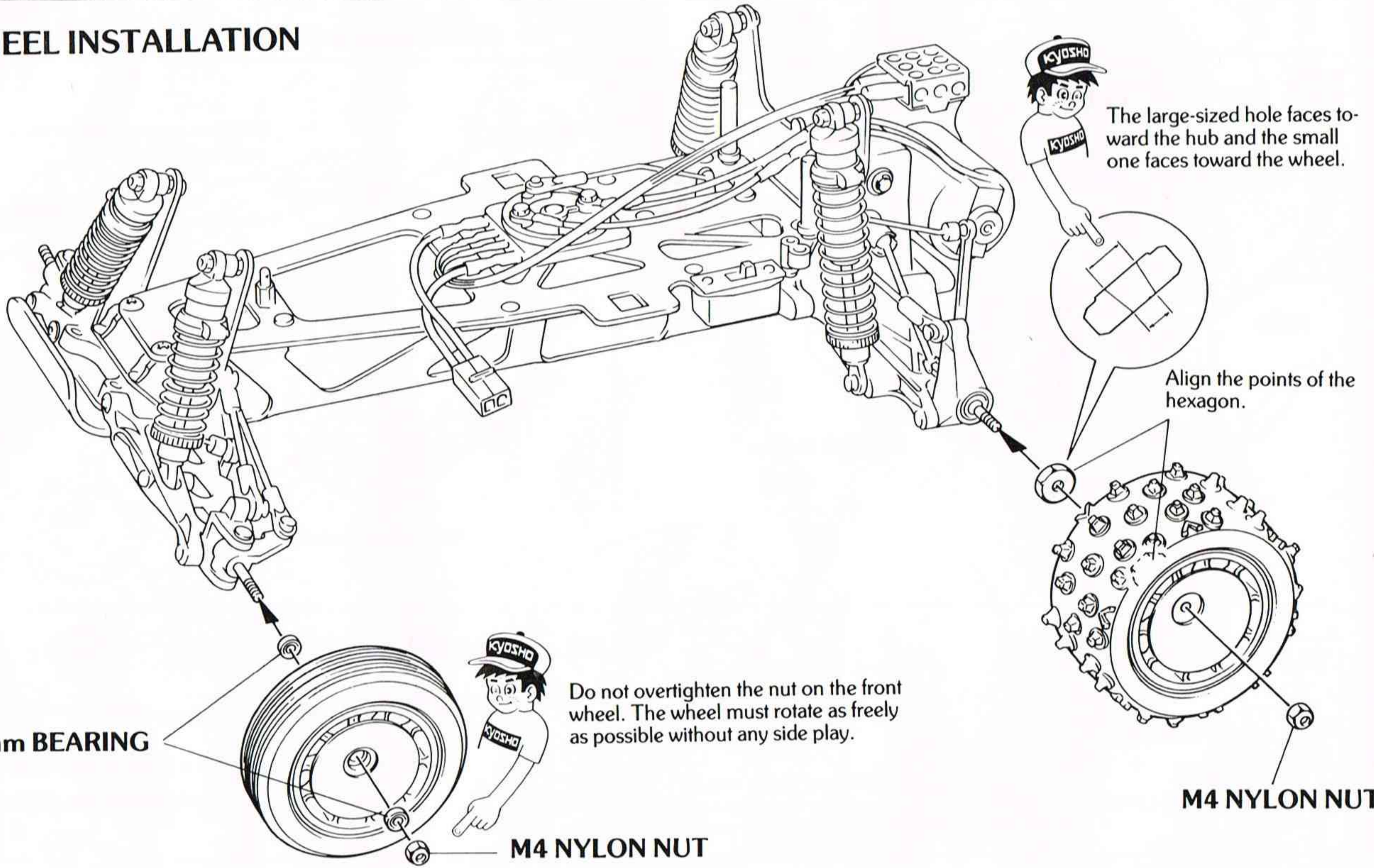
26 REAR WHEEL



90 REAR TIRE

31 TIRE AND WHEEL INSTALLATION

- M4 NYLON NUT . . . 4
- ⑥ 4mm x 8mm BEARING . . . 4
- ③① DRIVE WASHER . . . 2



Do not overtighten the nut on the front wheel. The wheel must rotate as freely as possible without any side play.

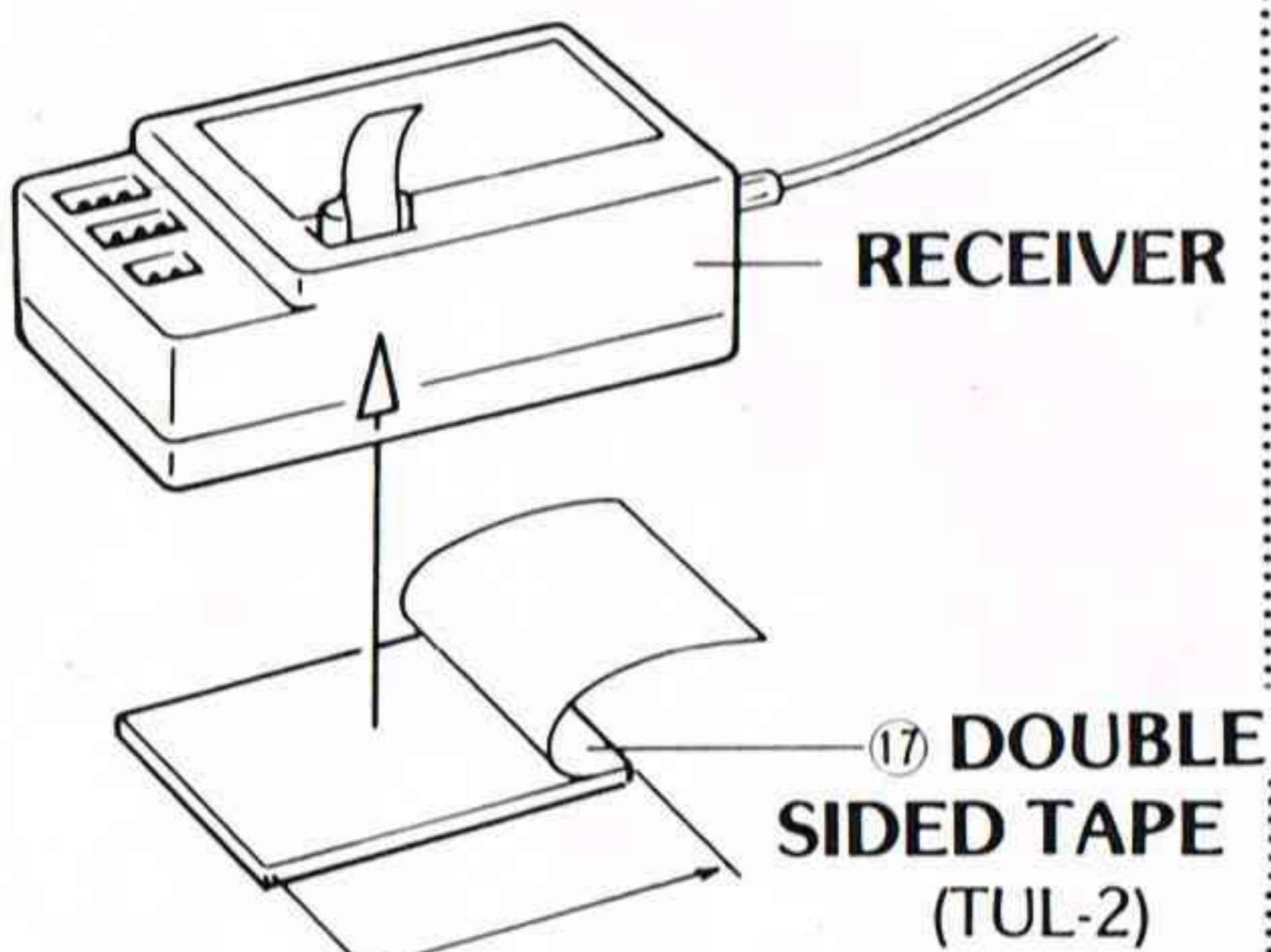
The large-sized hole faces toward the hub and the small one faces toward the wheel.

Align the points of the hexagon.

M4 NYLON NUT

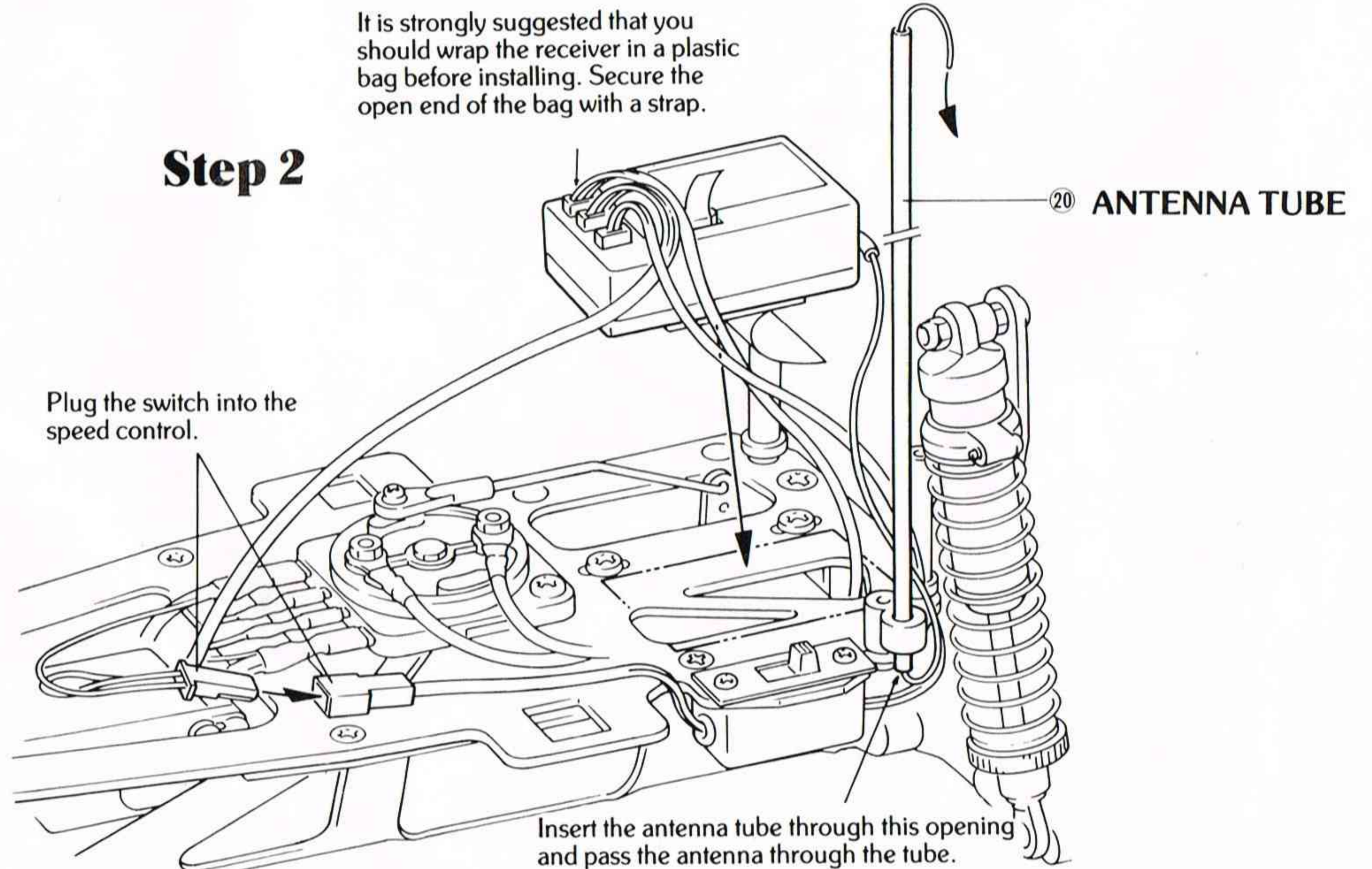
32 RECEIVER INSTALLATION

Step 1



Cut the double sided tape the same length as the receiver.

Step 2



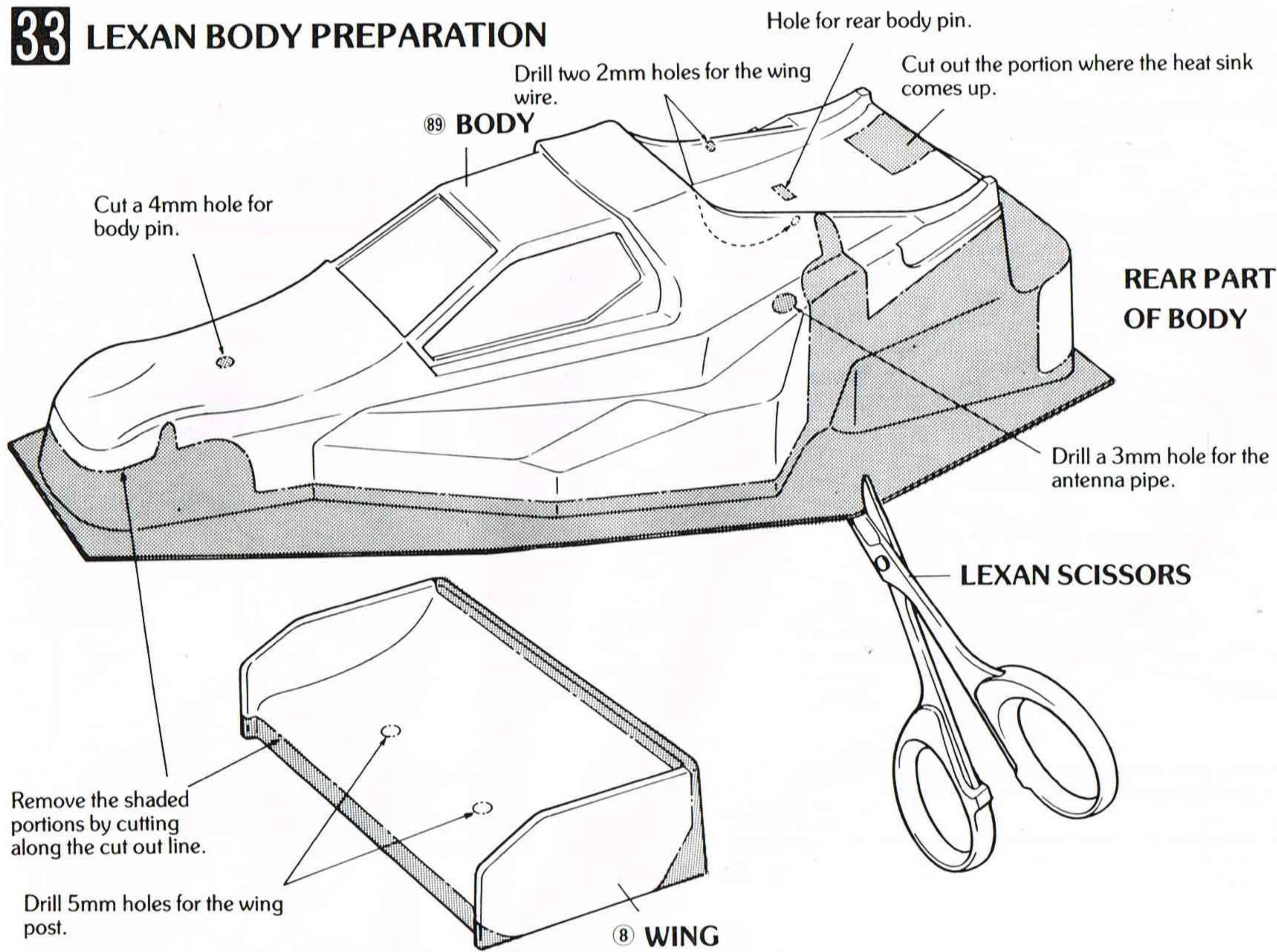
Plug the switch into the speed control.

It is strongly suggested that you should wrap the receiver in a plastic bag before installing. Secure the open end of the bag with a strap.

20 ANTENNA TUBE

Insert the antenna tube through this opening and pass the antenna through the tube.

33 LEXAN BODY PREPARATION



KYOSHO
THE FINEST RADIO CONTROL MODELS

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

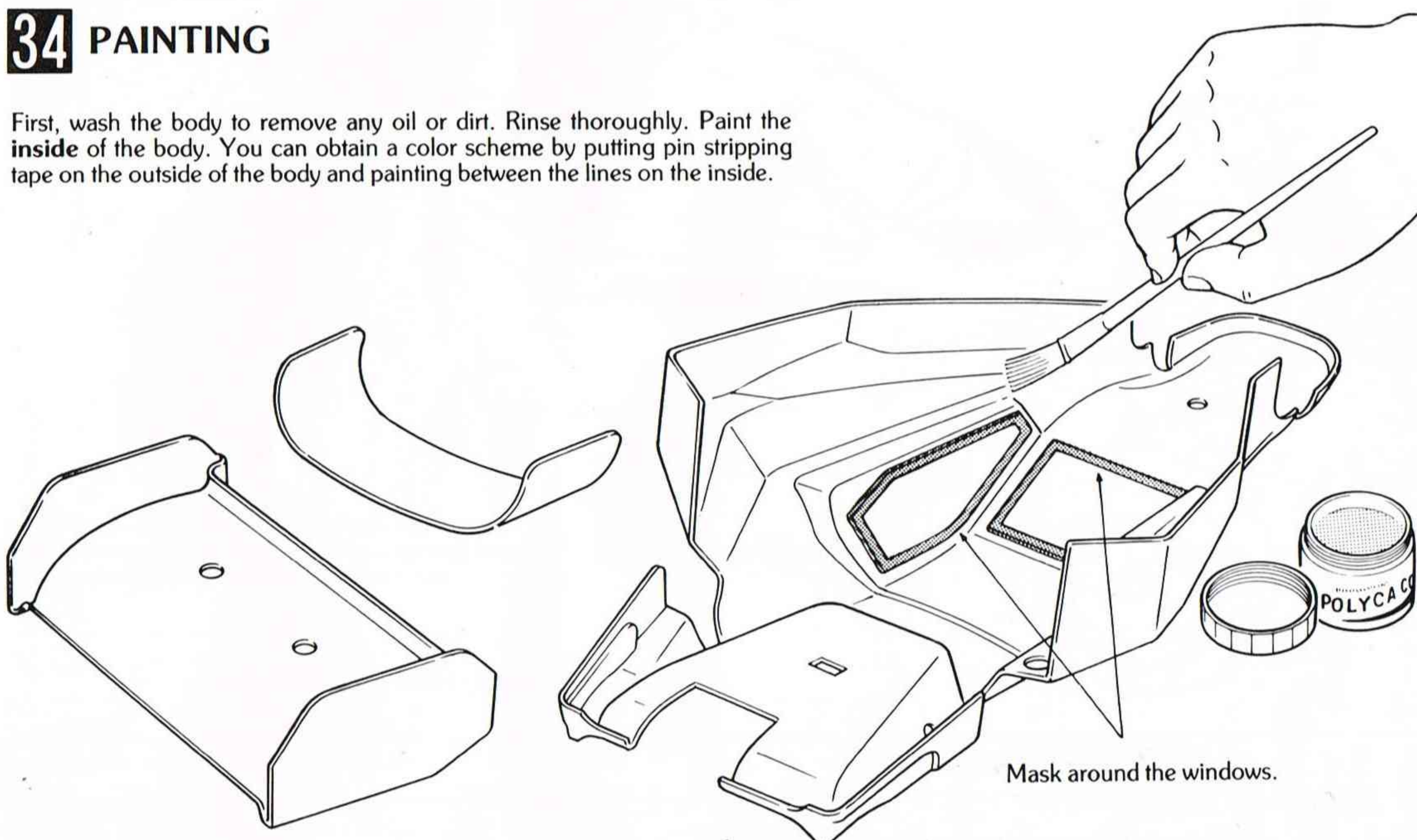
Special Curved Blades

NO. H-301

NO. H-300

34 PAINTING

First, wash the body to remove any oil or dirt. Rinse thoroughly. Paint the **inside** of the body. You can obtain a color scheme by putting pin stripping tape on the outside of the body and painting between the lines on the inside.



KYOSHO
THE FINEST RADIO CONTROL MODELS

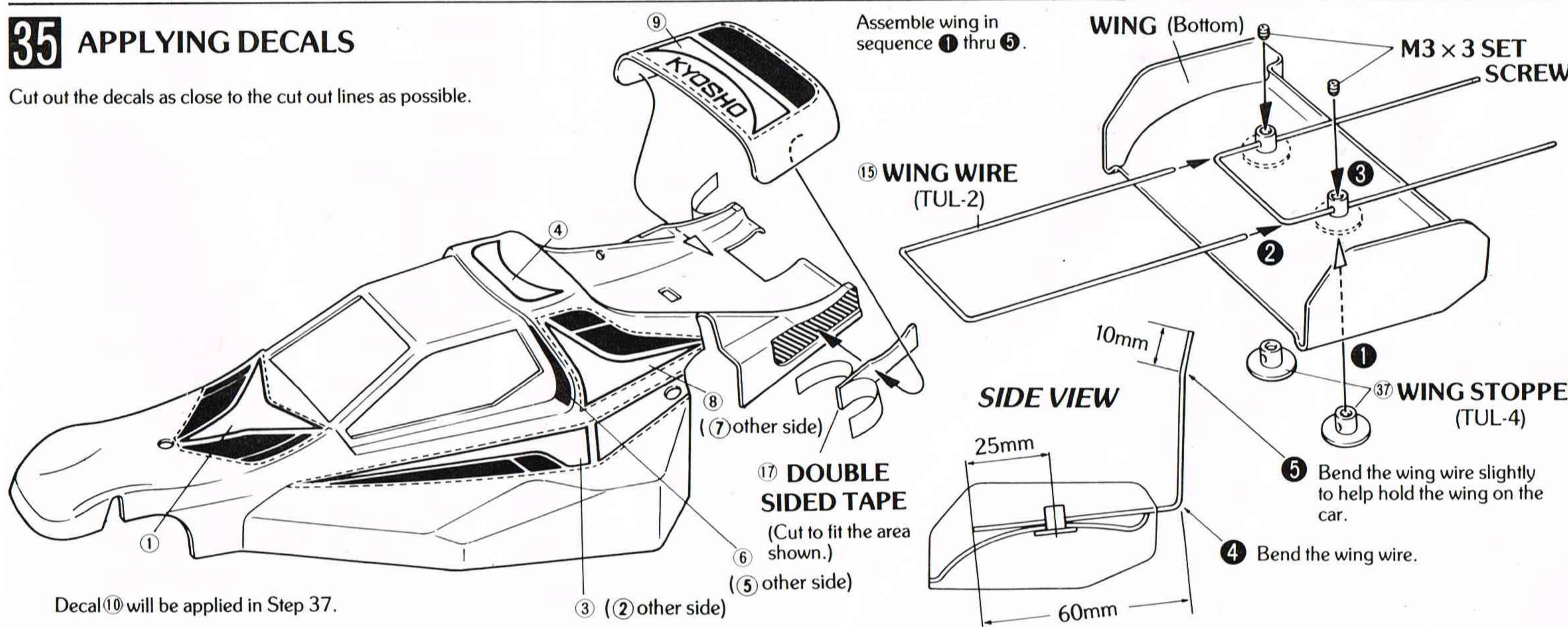
Polyca Color Paint is available for painting your Lexan bodies. Twelve great looking colors are available.

No.2230

KYOSHO
ACRYLIC MODEL SOLVING PAINT
POLYCA

35 APPLYING DECALS

Cut out the decals as close to the cut out lines as possible.

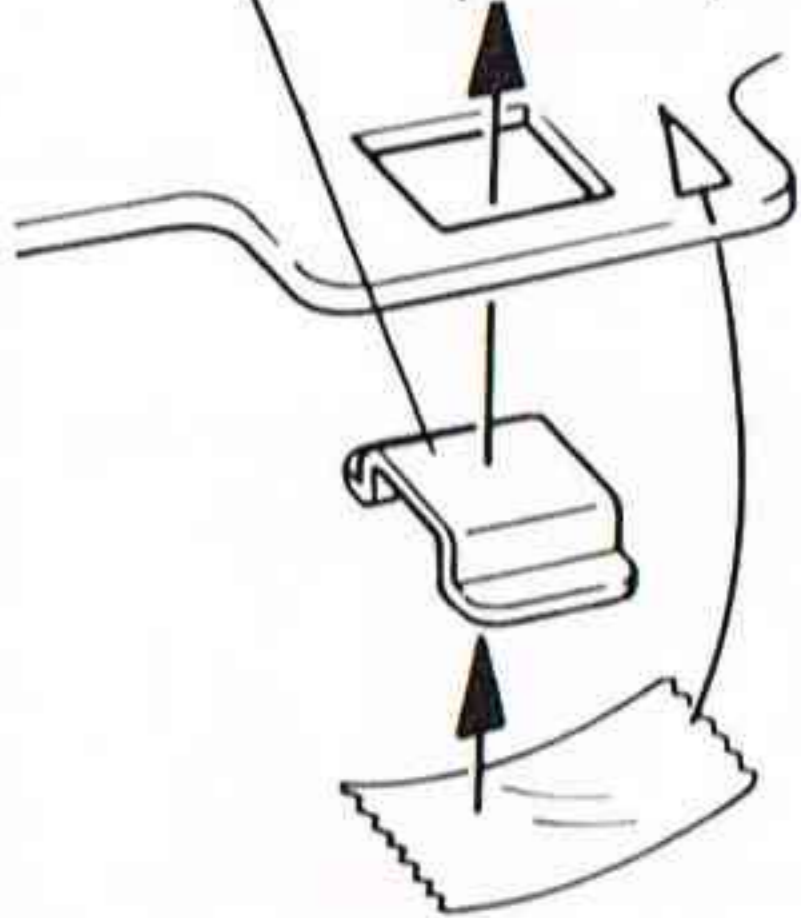


36 BATTERY MOUNTING

Always remove the battery when the car is not in use.

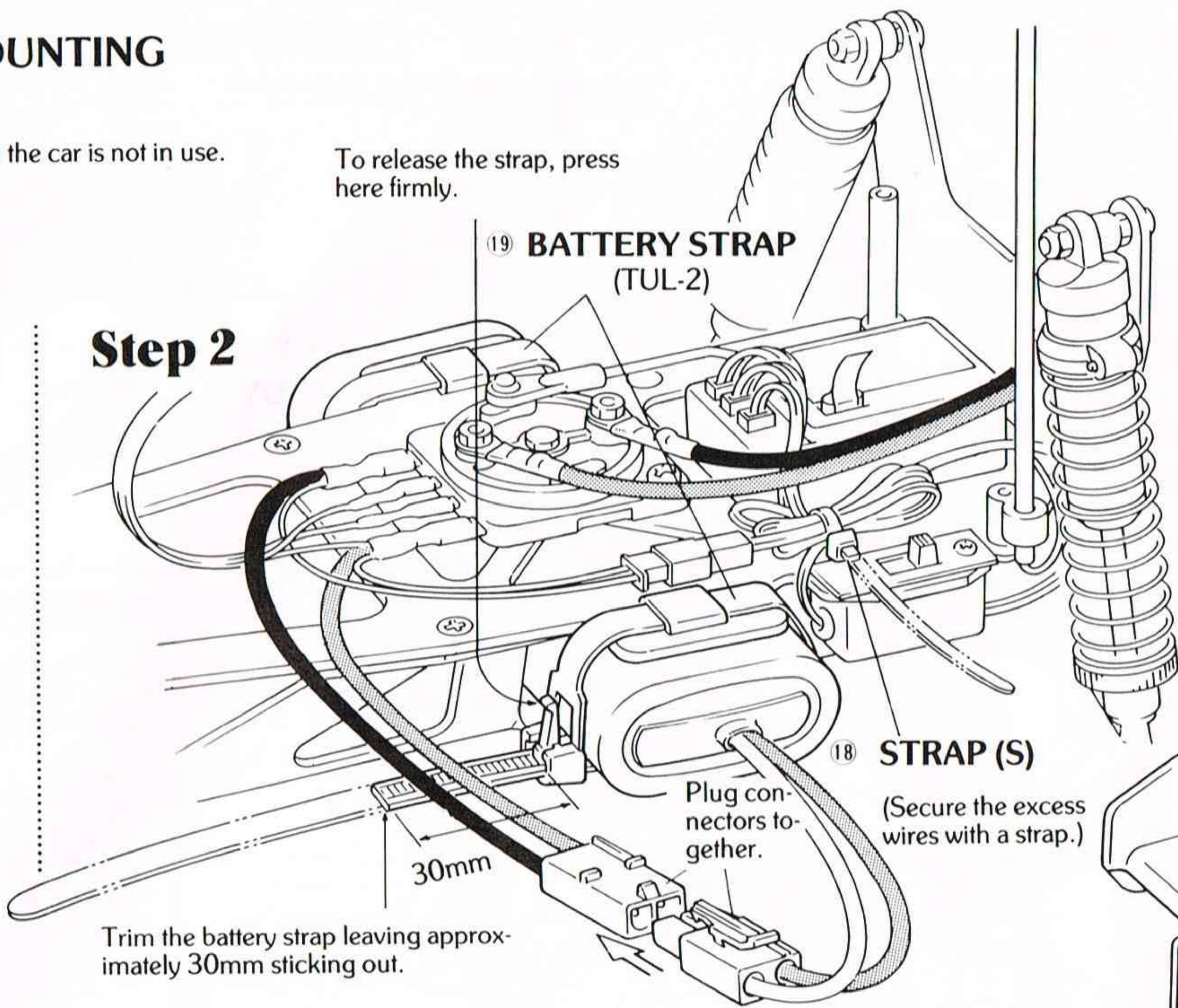
Step 1

88 BATTERY HOLDER (TUL-7)



CELLOPHANE TAPE

Step 2



KYOSHO

For maximum performance use a high performance Kyosho Battery.

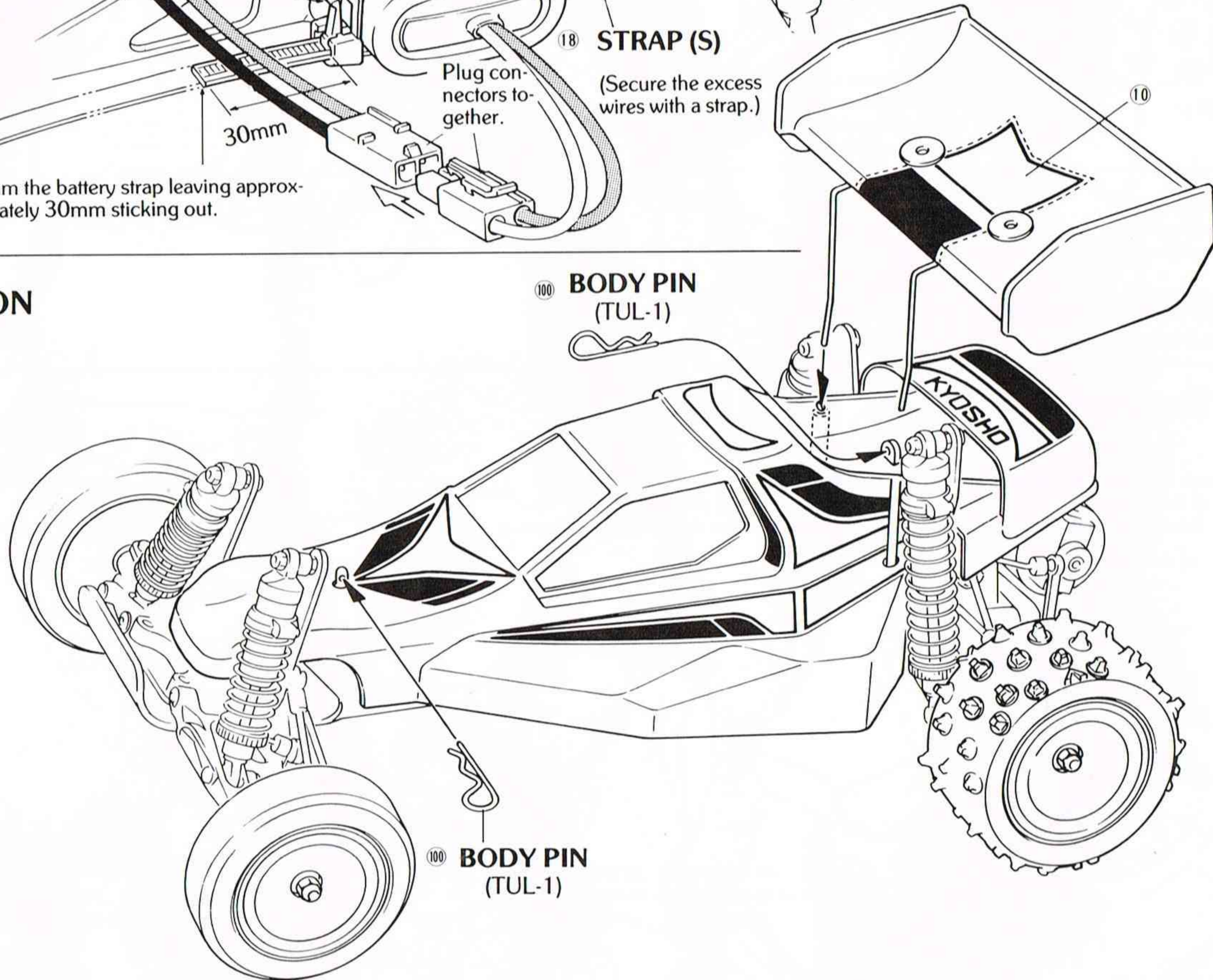


7.2V-1200mAh SCR Battery No.2310

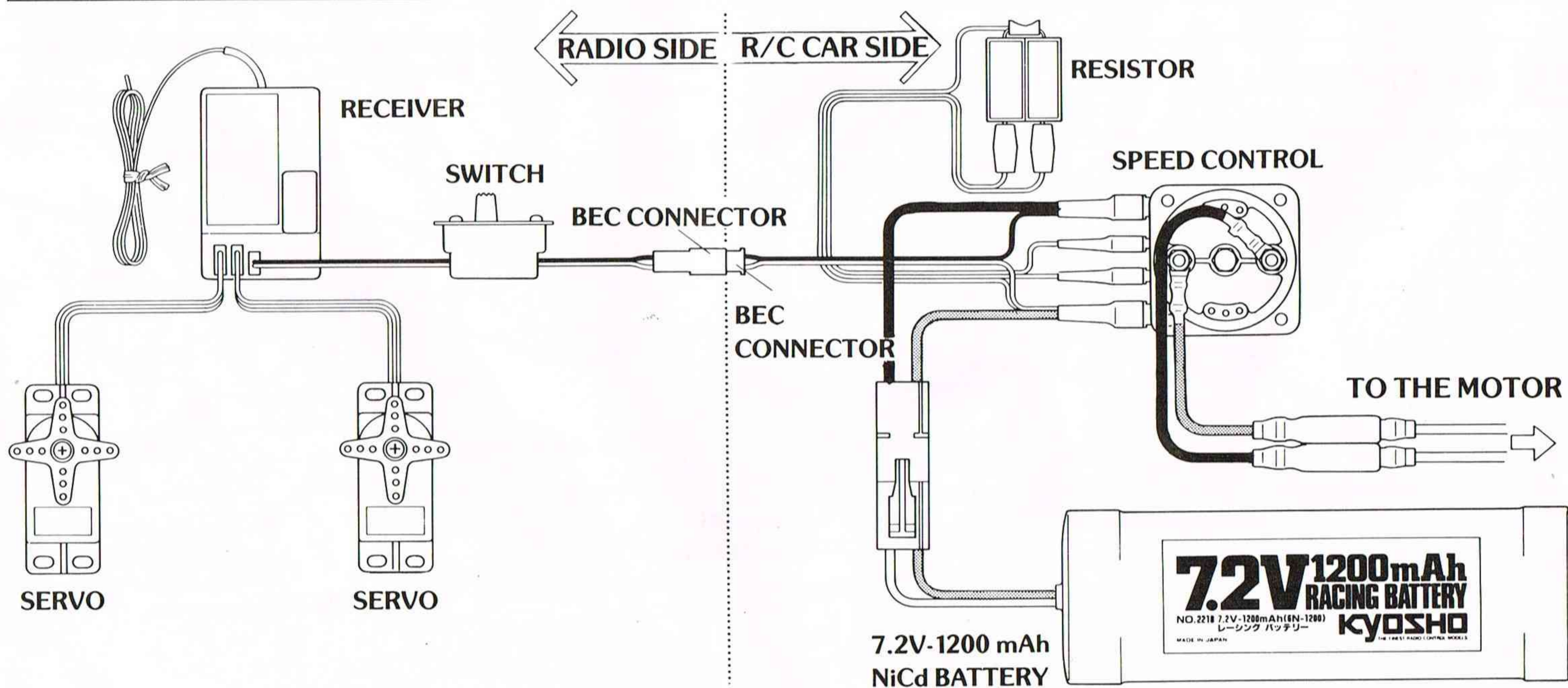


7.2V-1200mAh Power Battery .No.2306

37 BODY INSTALLATION



WIRING DIAGRAM

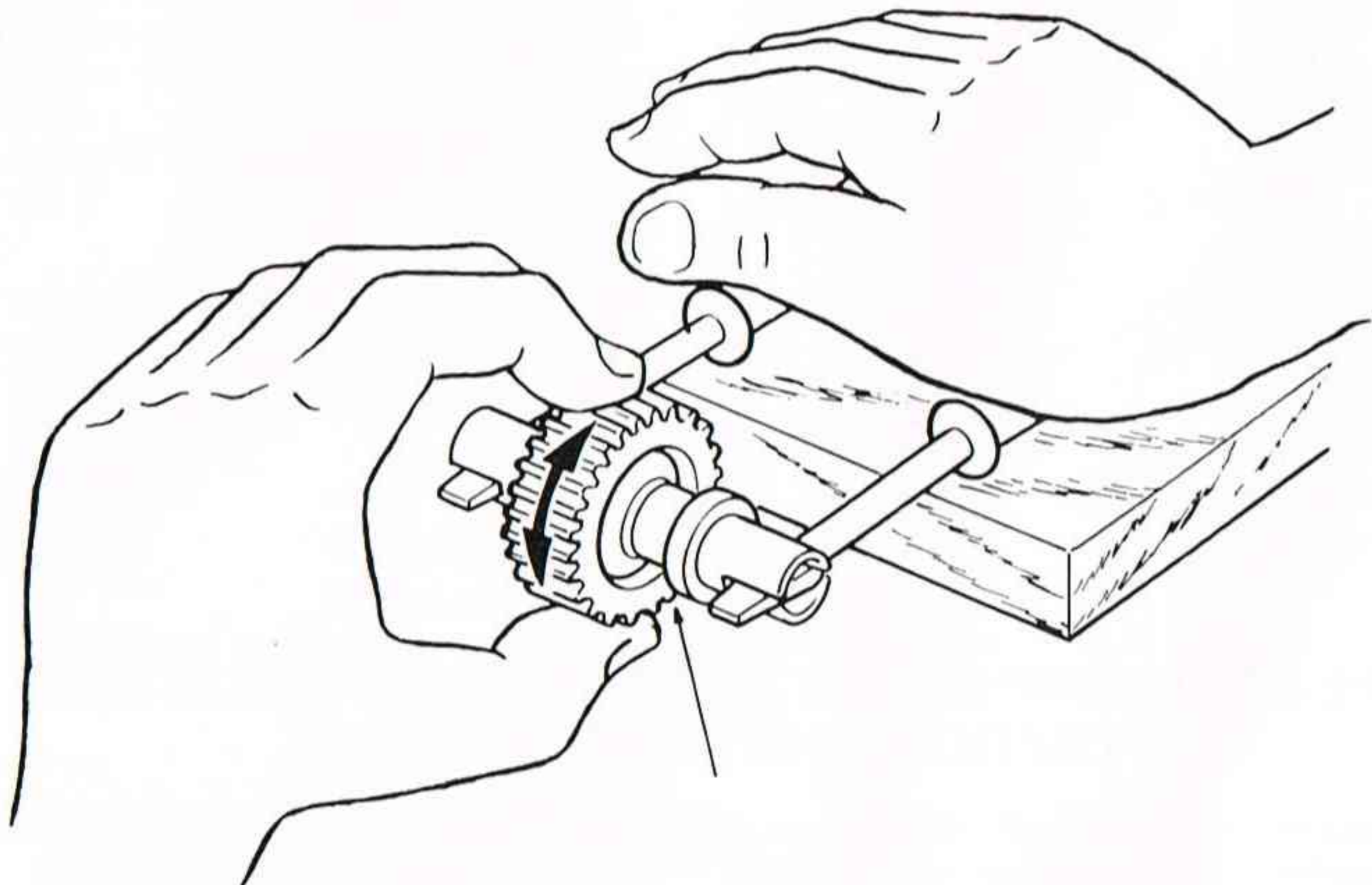


DIFFERENTIAL ADJUSTMENTS

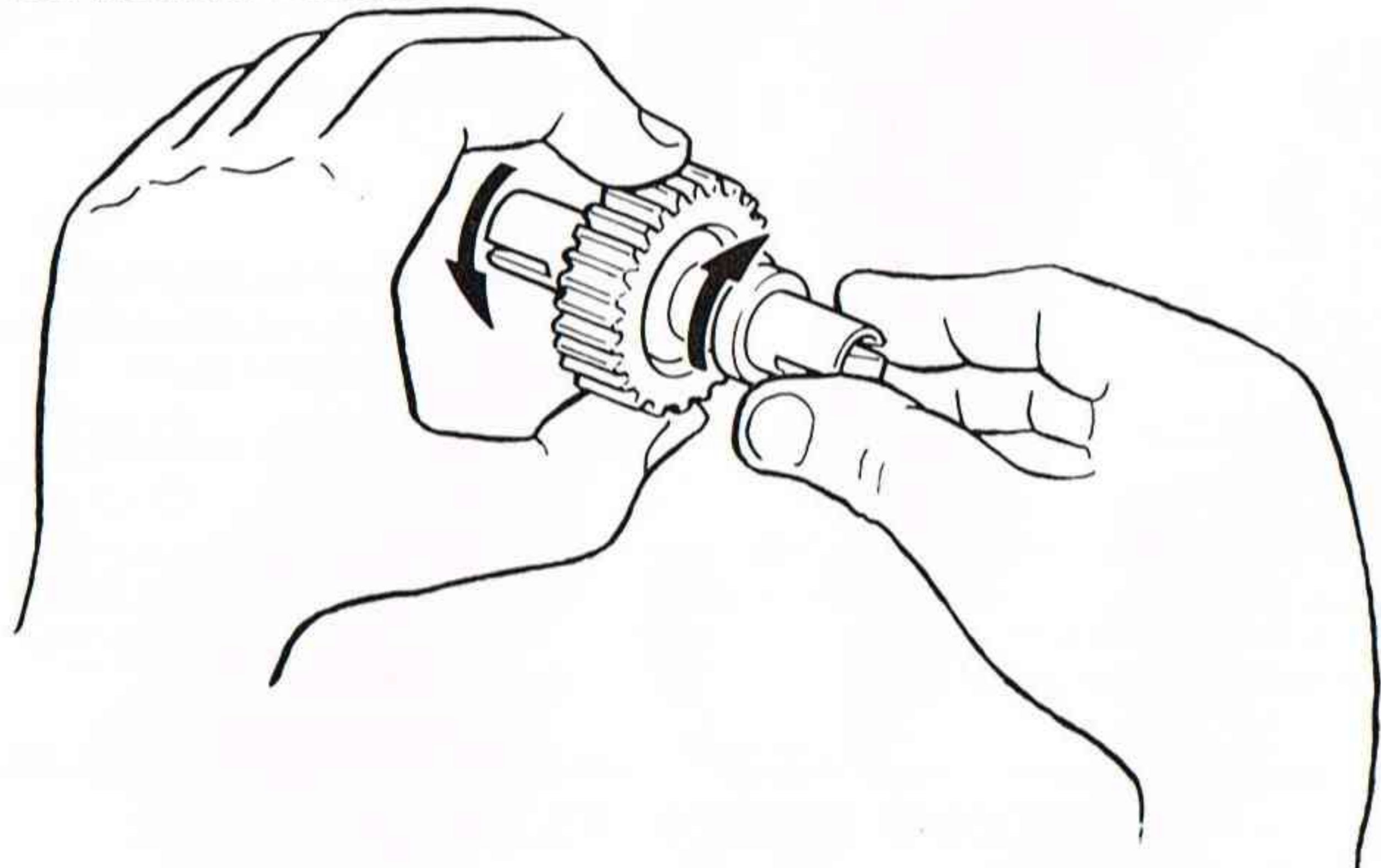
ADJUSTMENT OF BALL DIFFERENTIAL BEFORE INSTALLATION

Follow Steps 1 thru 3 for proper adjustment of the ball differential.

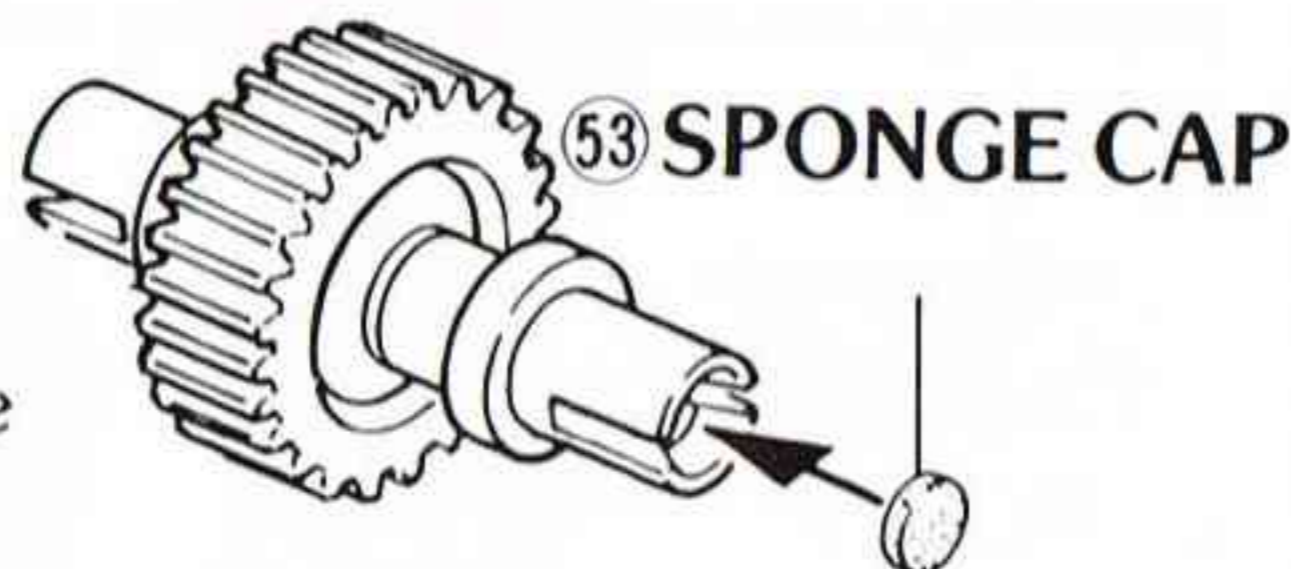
- 1 Hold the differential with two screw drivers as shown. Slowly tighten the cap screw until the gear does not rotate freely. Do not over tighten or the differential may be damaged.



- 2 Hold the differential and turn the shaft. The shaft on the other side should turn in the opposite direction. This is called the differential effect. The tighter the cap screw the less the effect becomes.



- 3 Repeat Steps 1 and 2 until the adjustment feels correct, then install the sponge cap into the end of the shaft that the cap screw is in.



RELATION OF MOTOR AND GEAR RATIO

PINION GEAR	14T	15T	16T	17T	18T	19T	20T
GEAR RATIO	8.8	8.2	7.7	7.3	6.9	6.5	6.2
SUGGESTED MOTOR	240S, 240SB						
			360 GOLD, 360PT				
	480S, 480T, 480 GOLD						

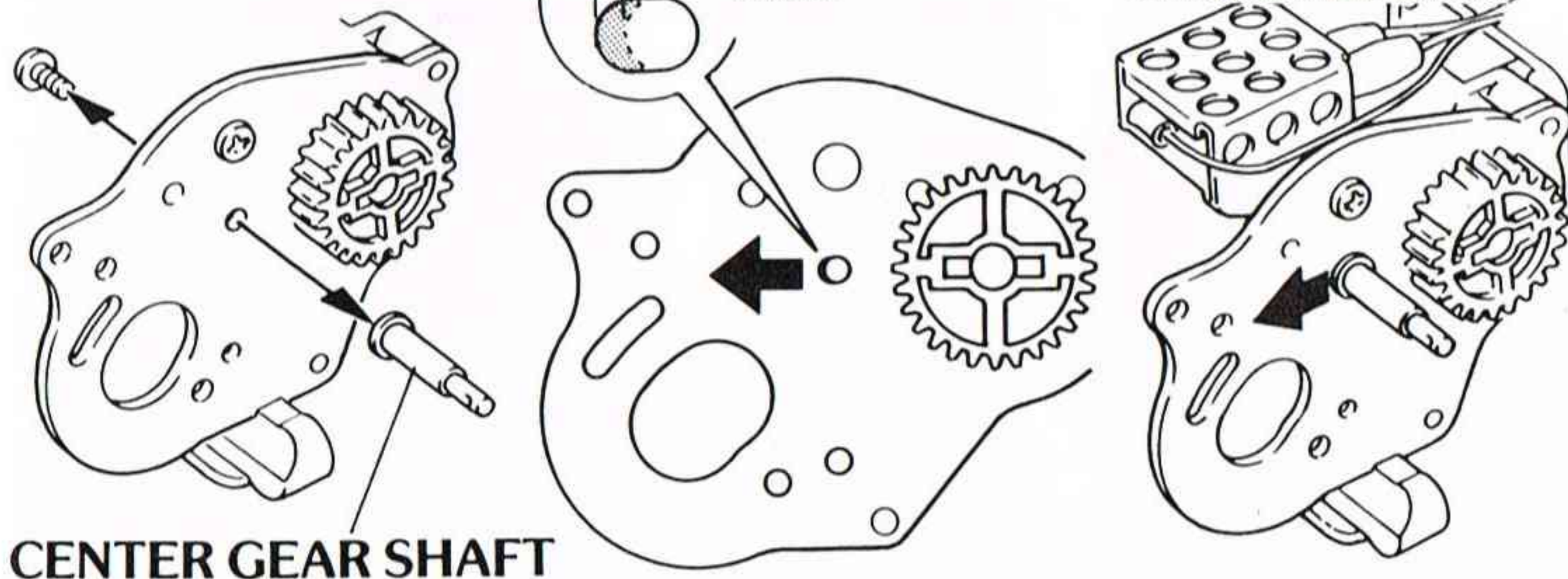
ADJUSTMENT OF CENTER GEAR

If the center gear mesh is too tight when installing the center gear in Step 27, remove the center gear shaft and enlarge the hole with a round file as shown below.

- Step 1 Remove the center gear shaft.

- Step 2 File the hole .1mm - .3mm as indicated.

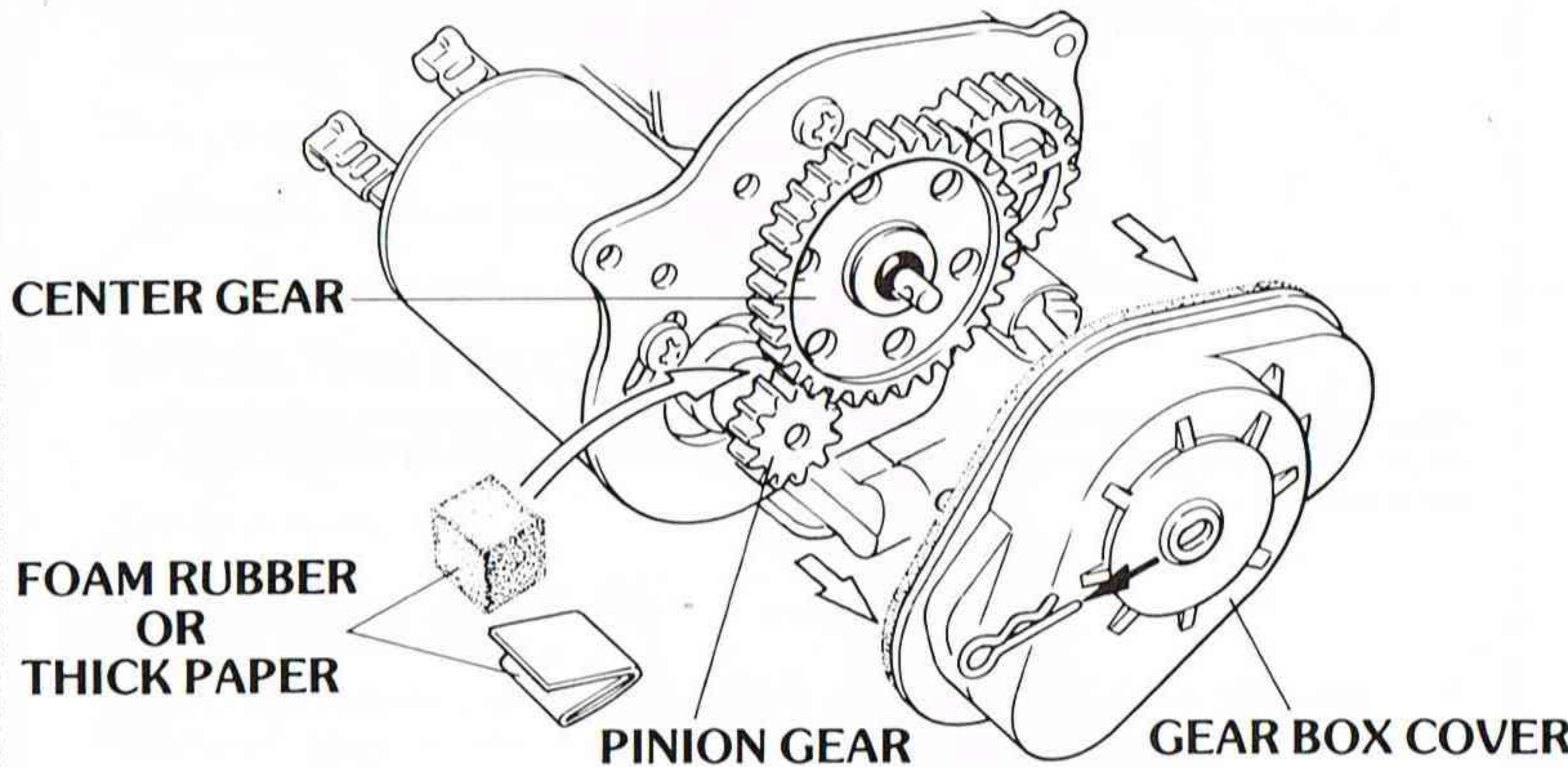
- Step 3 Reinstall the shaft, pushing it in the direction of the arrow.



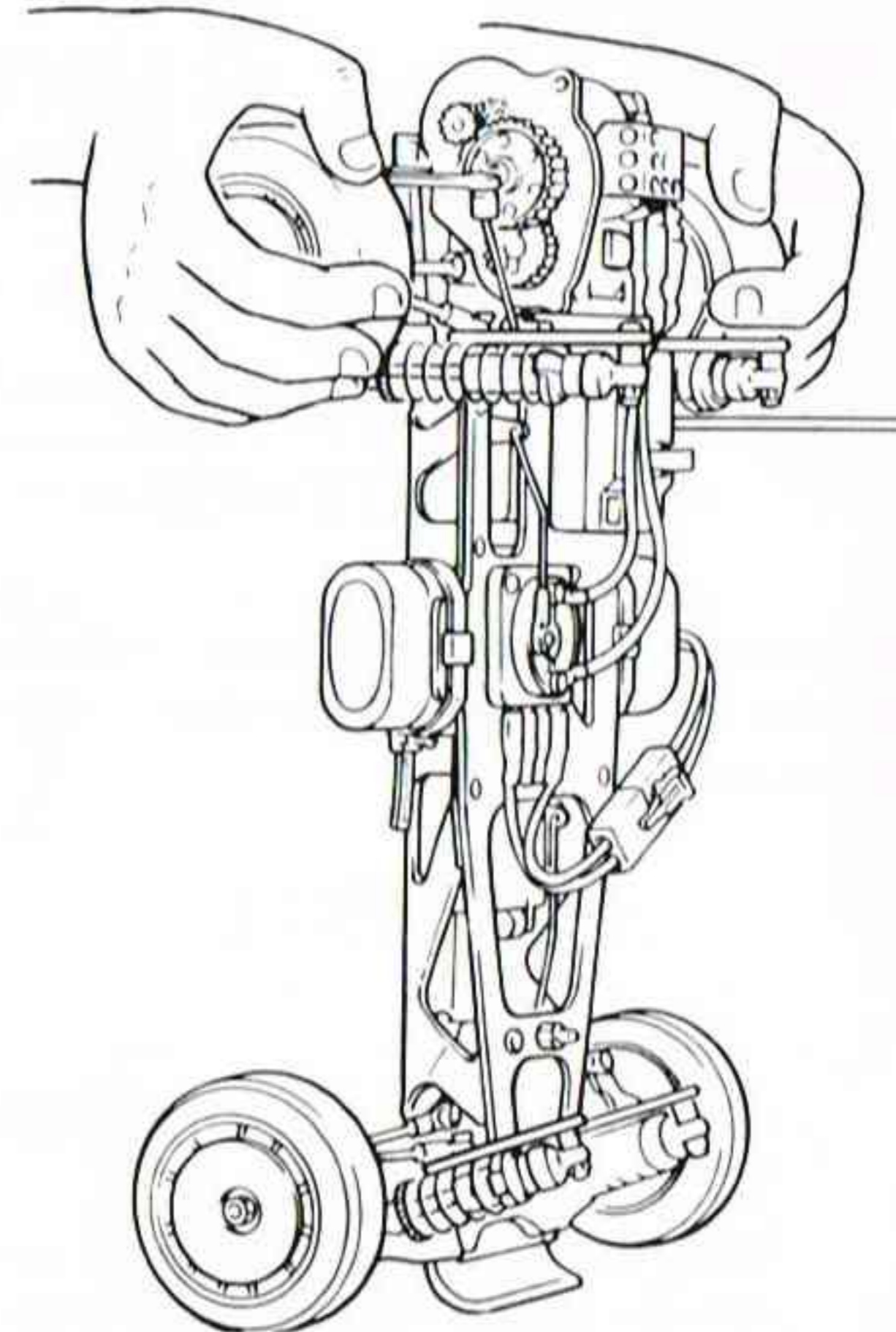
ADJUSTMENT OF BALL DIFFERENTIAL AFTER INSTALLATION

After the Turbo Ultima is assembled, perform the following test to assure proper ball differential adjustment.

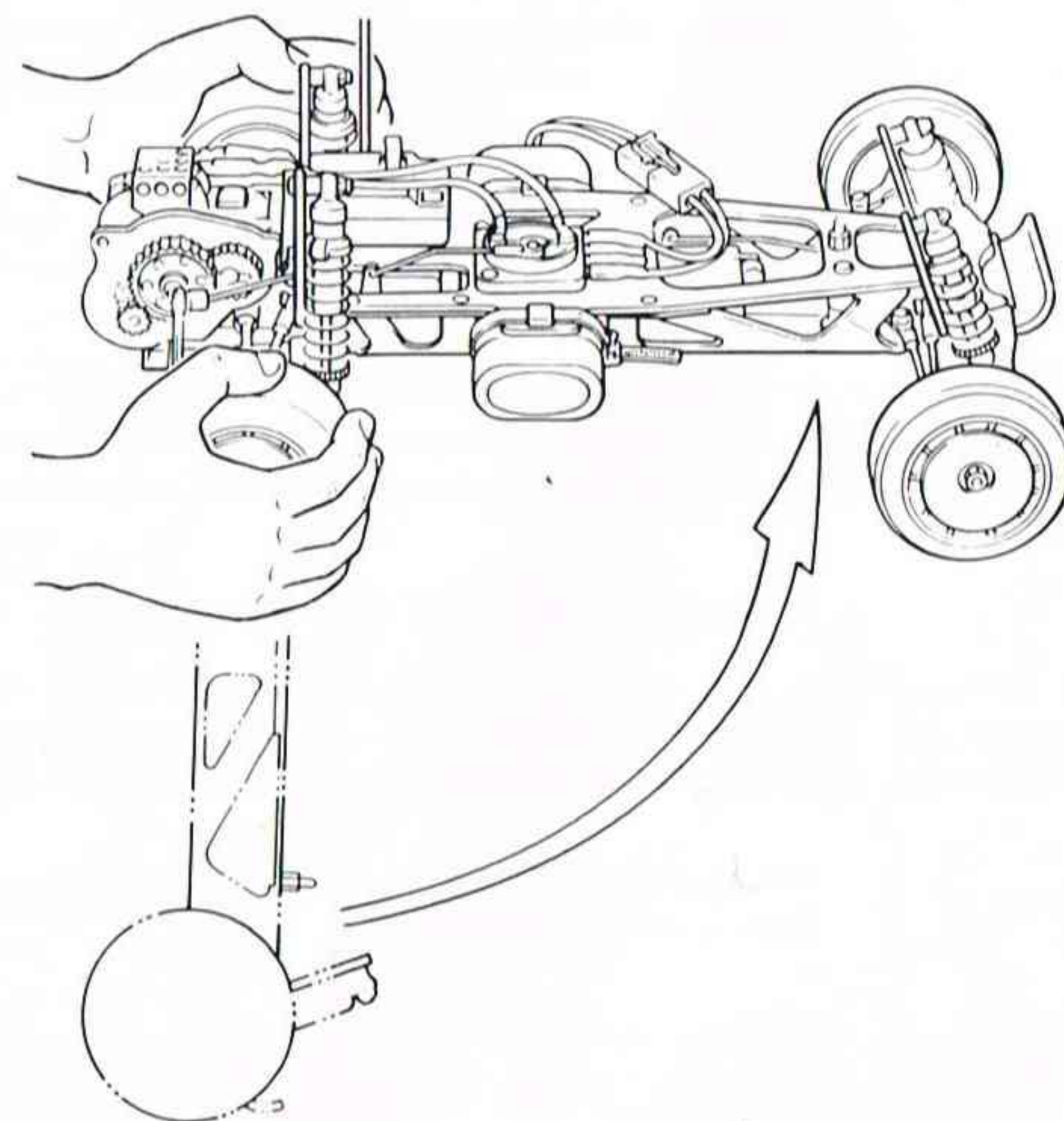
- 1 Remove the gear box cover and insert a piece of foam or thick paper between the pinion gear and center gear to lock them.



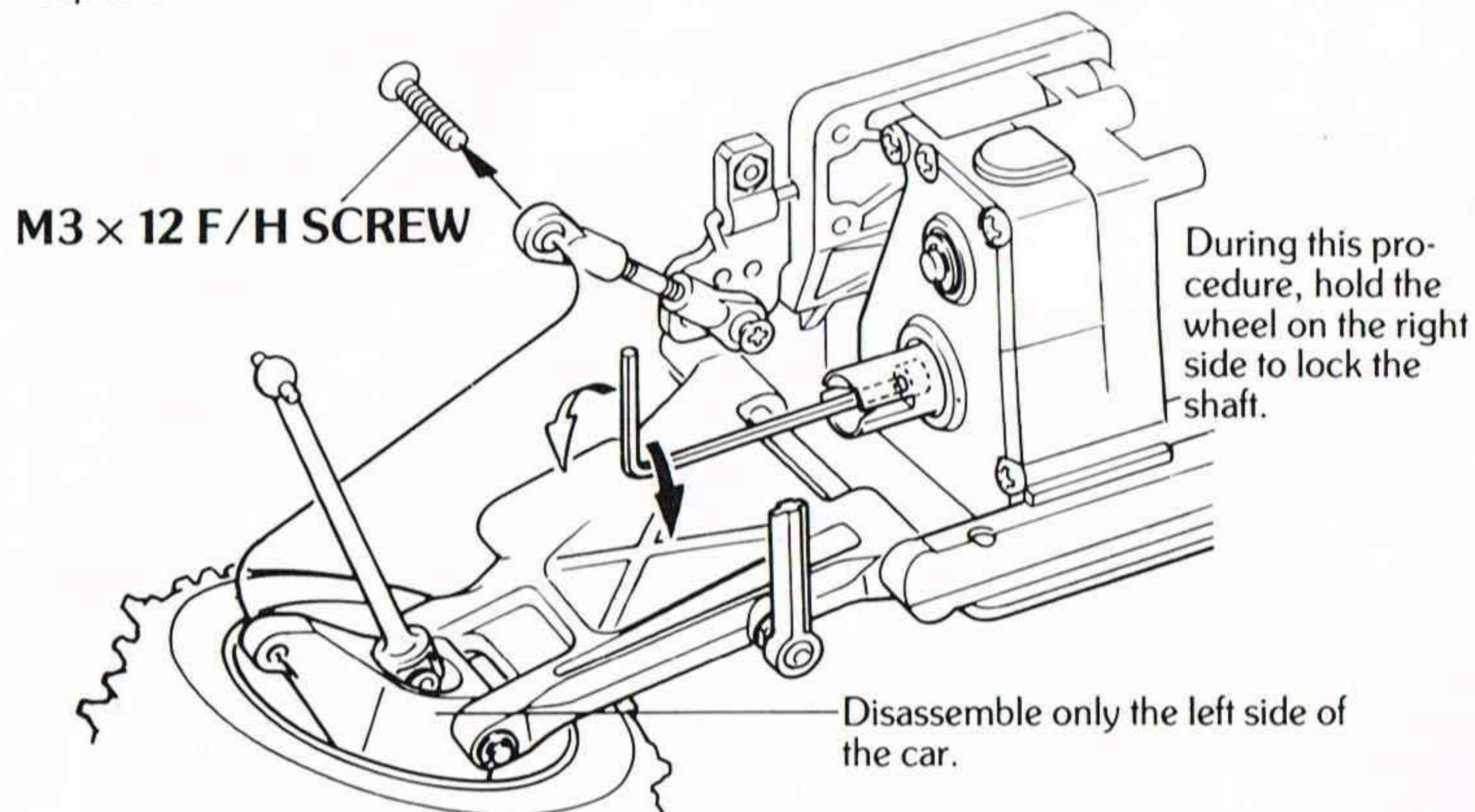
- 2 Hold both rear wheels with your hands.



- 3 Swing the front of the Turbo Ultima upward. If adjusted correctly the car will rise to the horizontal position and no farther.

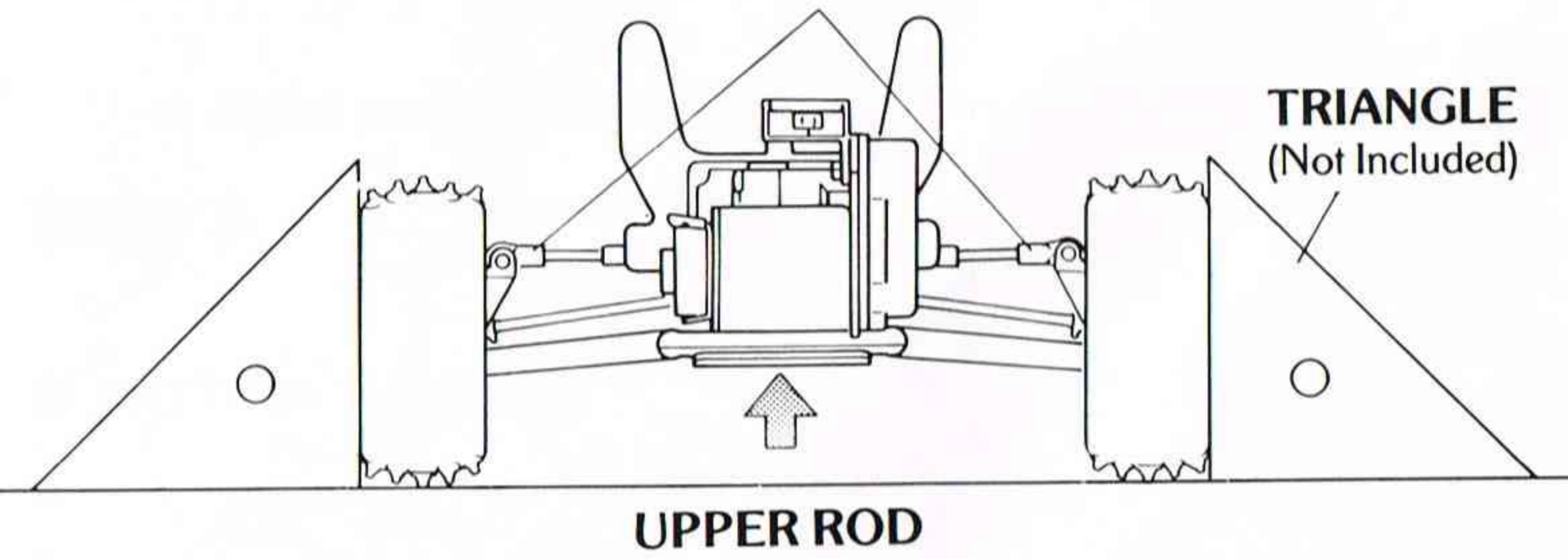


- 4 If the car goes beyond the horizontal position, the cap screw is too tight. If it does not reach the horizontal position, the cap screw is too loose. To readjust the ball differential remove the M3 x 12 F/H screw that fastens the rear hub and adjust the cap screw.

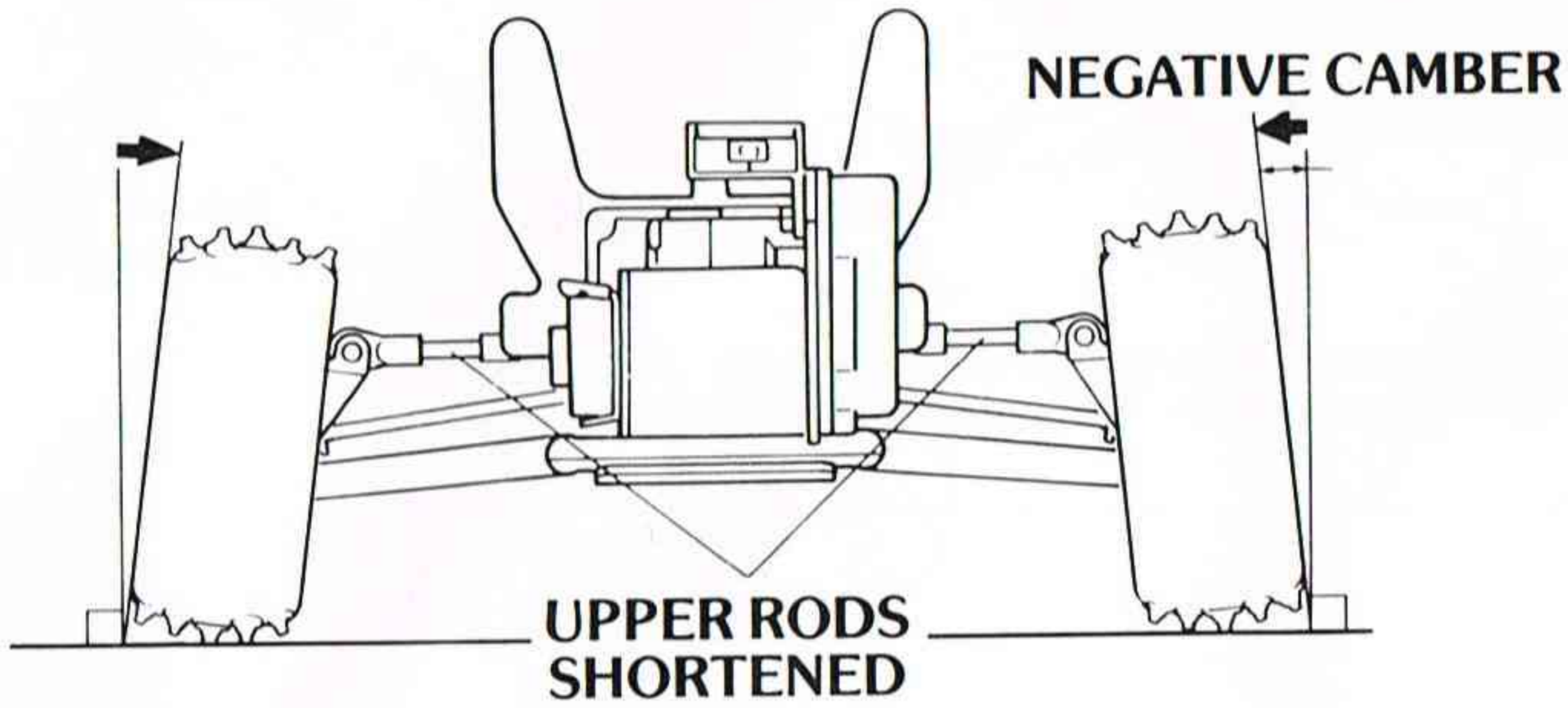


BASIC ADJUSTMENT GUIDE FOR THE TURBO ULTIMA

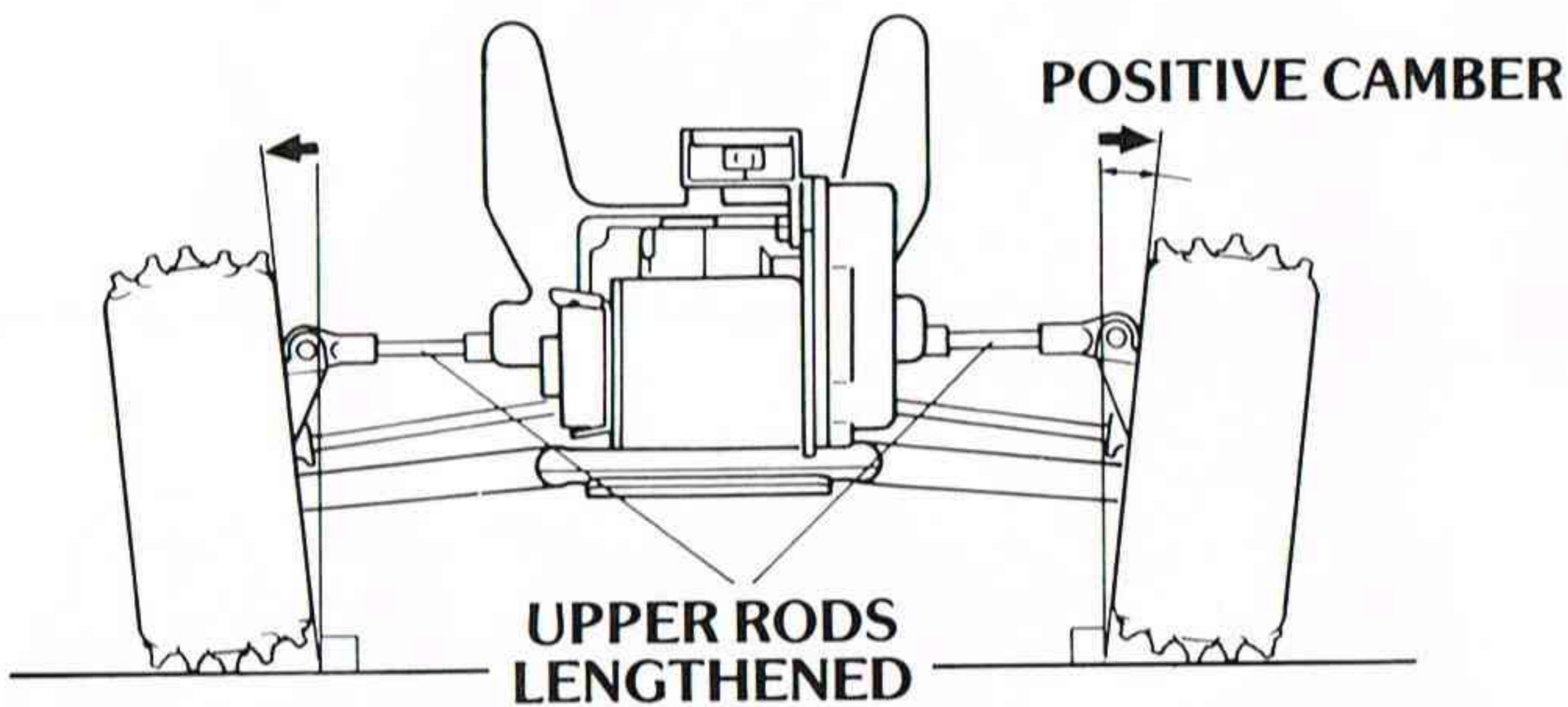
CAMBER ADJUSTMENT



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



Negative camber results when you make the upper rods shorter. With negative camber on the front wheels, sharper steering tendency will result while on the rear wheels the traction improves.

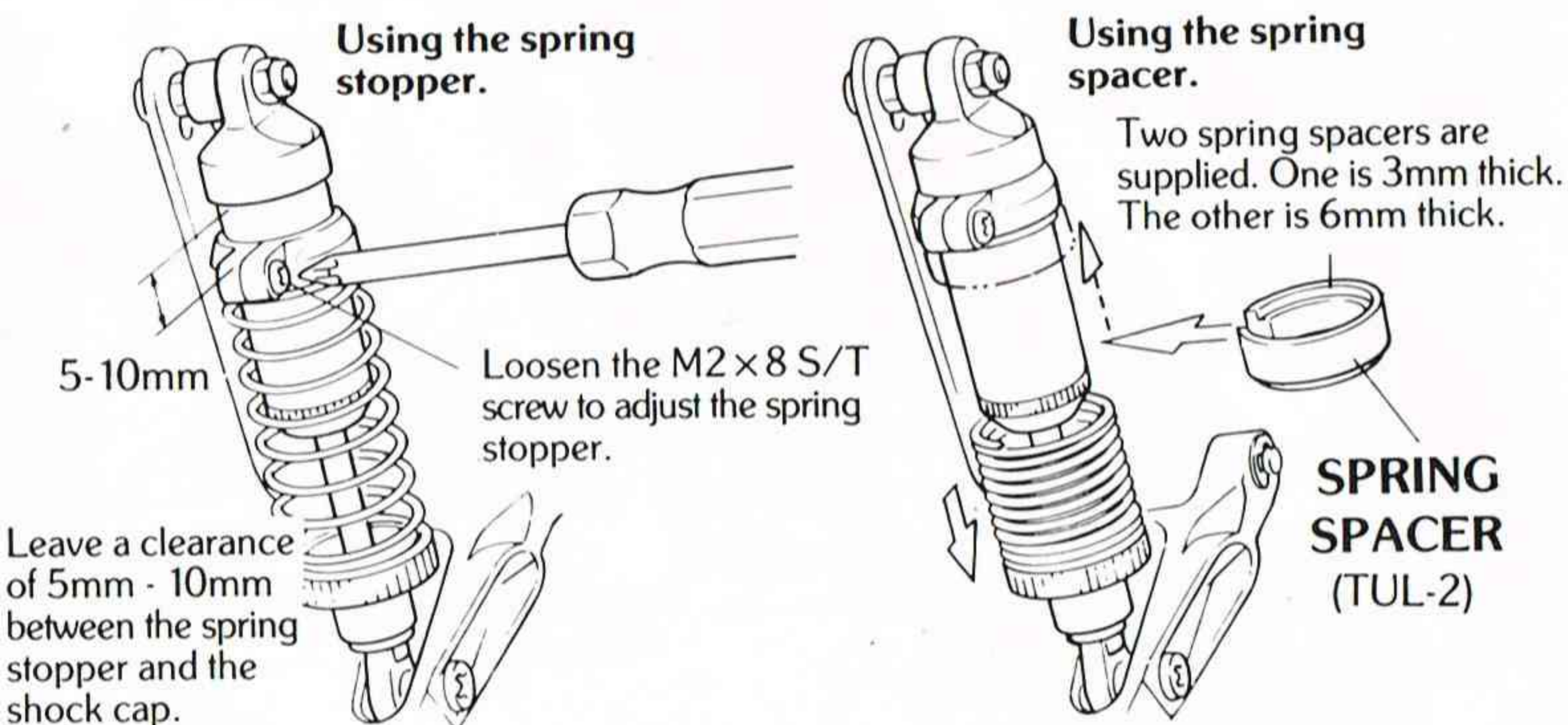


Positive camber results when you make the upper rods longer with positive camber on the front wheels under steering will result while on the rear wheels the car will over steer. With excessive positive camber the swing shafts may dislocate.

ADJUSTMENT OF SHOCKS

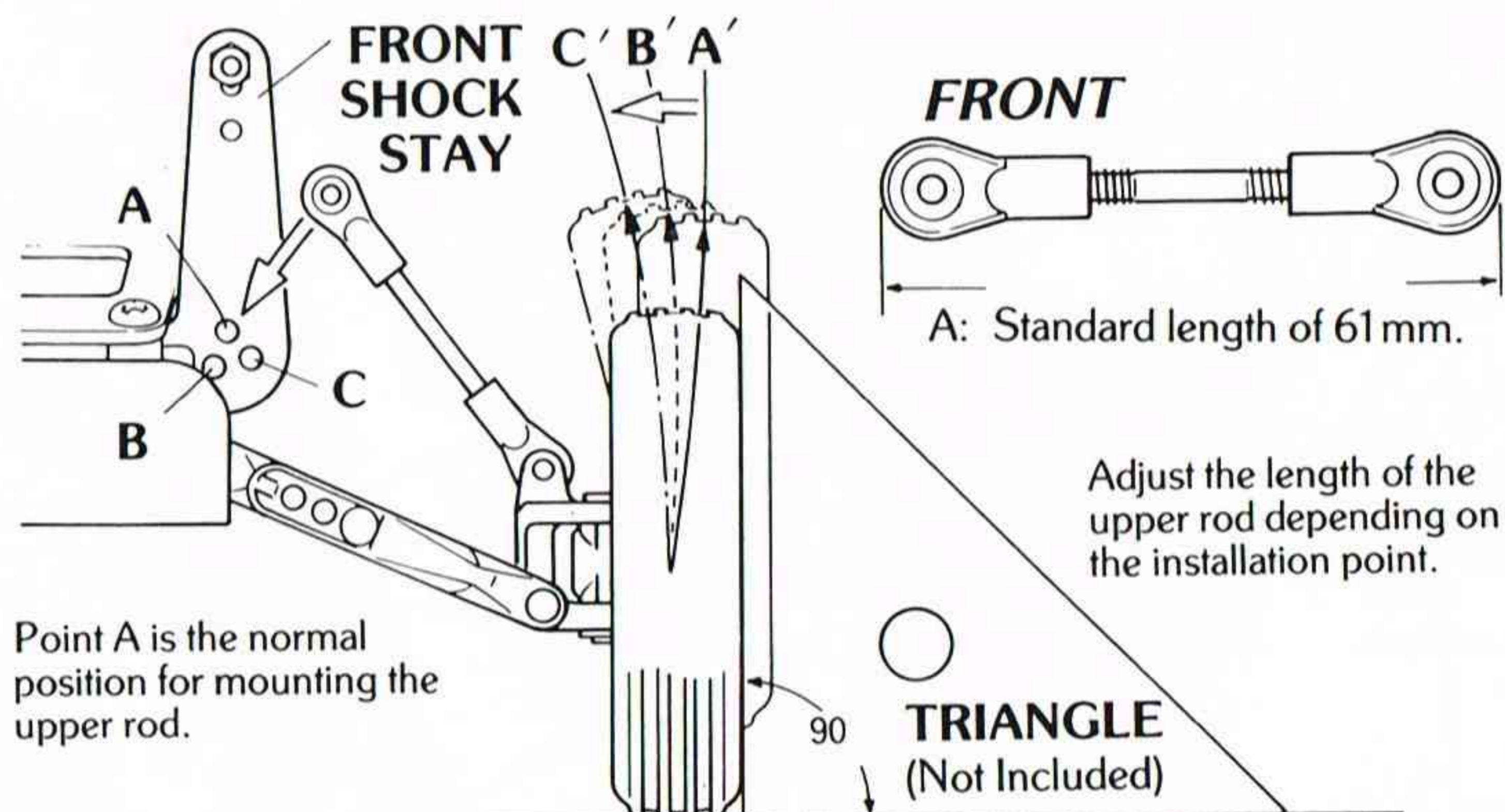
FRONT	Lightweight shock oil Weak spring tension	SHARP STEERING RESPONSE
FRONT	Heavy shock oil Strong spring tension	SLOW STEERING RESPONSE
REAR	Lightweight shock oil Weak spring tension	MORE WHEEL TRACTION
REAR	Heavy shock oil Strong spring tension	LESS WHEEL TRACTION

ADJUSTMENT OF SHOCK SPRINGS



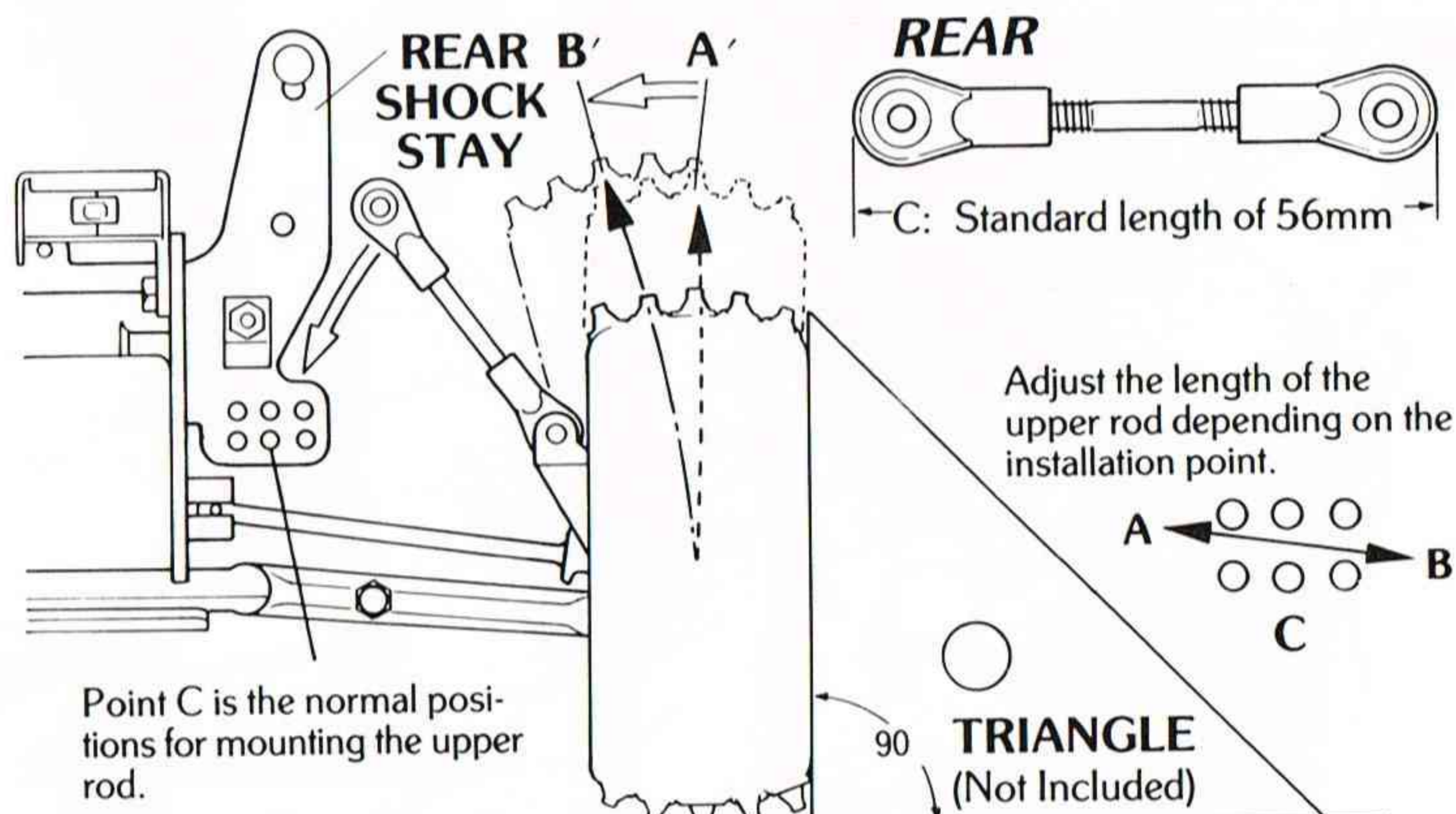
RELATIONSHIP BETWEEN UPPER ROD MOUNTING POSITION AND CAMBER ANGLE.

The drawing below shows the different camber angles, at maximum deflection of the front wheel, when the upper rod is mounted at the different positions on the front shock stay.



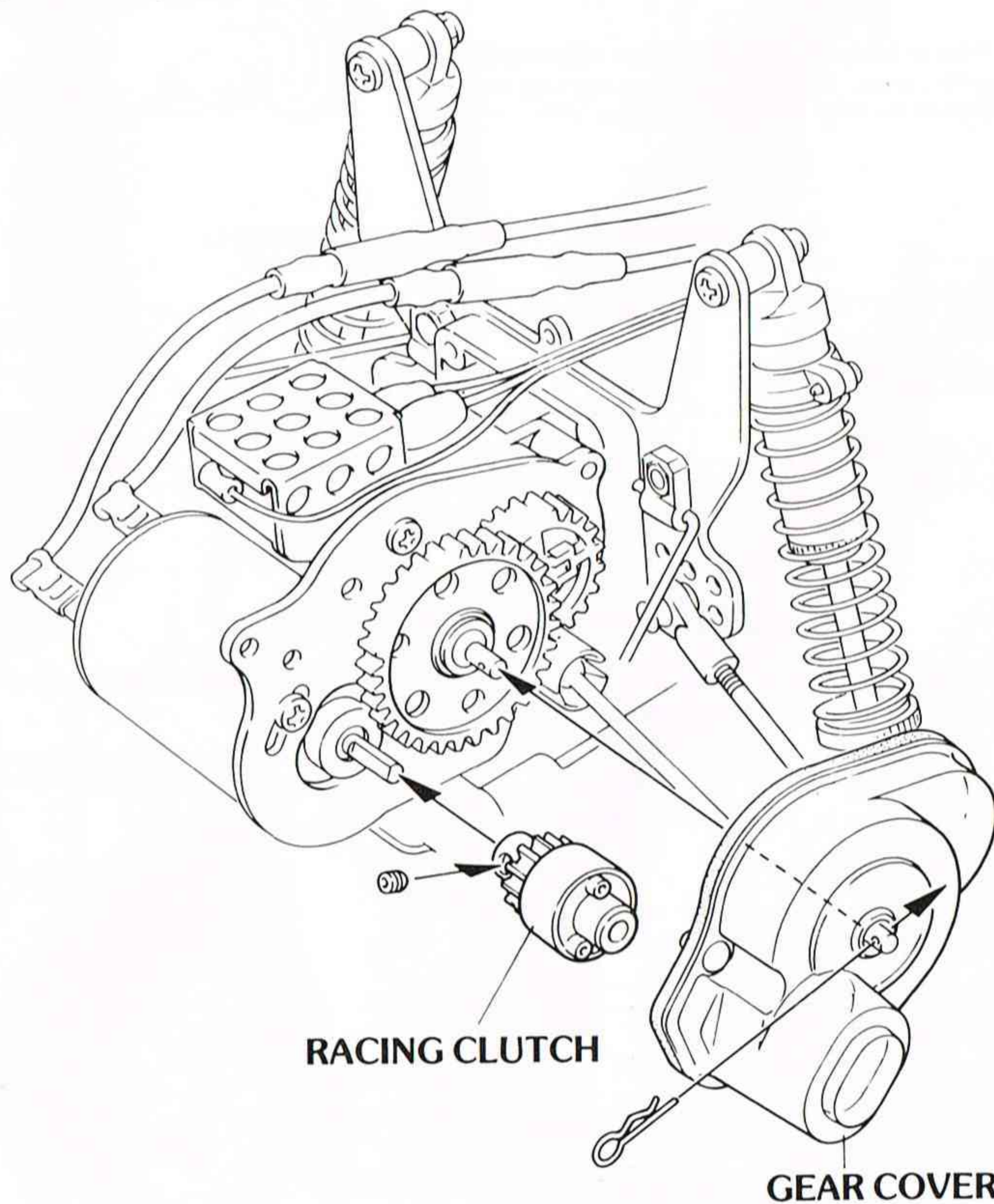
RELATIONSHIP BETWEEN UPPER ROD MOUNTING POSITION AND CAMBER ANGLE

The drawing below shows the different camber angles, at maximum deflection of the rear wheel, when the upper rod is mounted at the different positions on the rear shock stay.



OPTIONAL RACING CLUTCH

This is a centrifugal clutch for the electric buggy car, it also functions as a torque limiter. It provides easy control on slippery surfaces, and at the same time protects the motor and gears from impact.



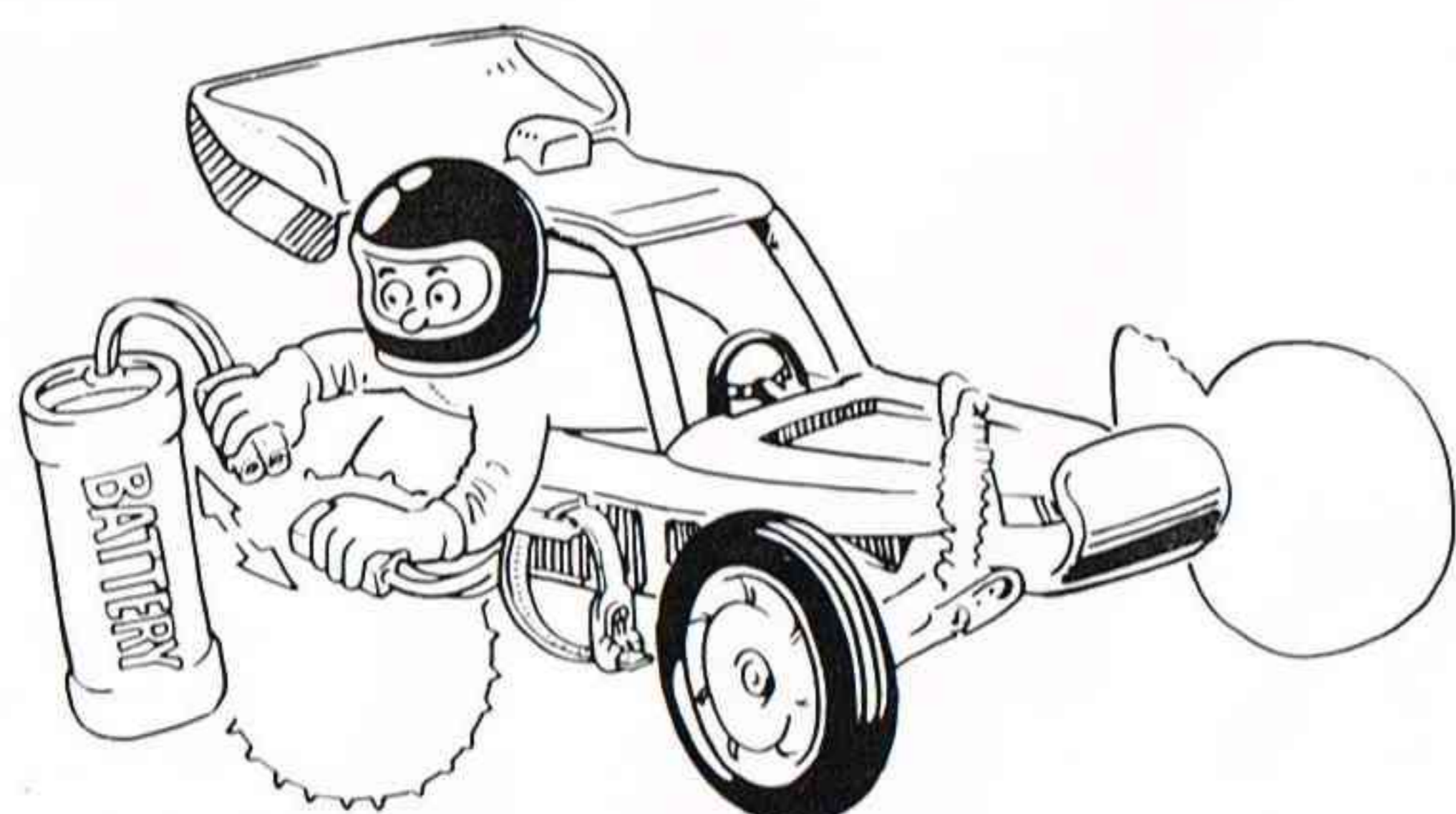
There are five types of racing clutches available from Kyosho. Refer to the Optional Parts List on page 27.

RUNNING YOUR TURBO ULTIMA

Note: The same battery powers the radio **and** motor. As soon as the car starts to slow down, recharge the battery. Otherwise, you will quickly lose control.



After running, always remove the battery from the car.



CHECK BEFORE EVERY RUN

- Check to see if all bolts and nuts are tightened firmly.
- Check to see if NiCd battery is fully charged.
- Check to see if the steering and speed control is in proportion to your control of the transmitter.
- Check to see that all wiring is properly insulated.
- Check to see if parts are moving smoothly.

OPERATING PROCEDURES

- Turn transmitter switch on.
- Switch on the receiver.
- Check to see if the radio system is working properly.

NOTE: When turning off the switches, turn off the receiver first then transmitter. Otherwise, the servos may be left in a position other than neutral.

TROUBLE SHOOTING IF THE CAR DOES NOT START

- Poor contact of connectors of batteries, connector, and speed control.
- Check to see if the ni-cad battery is fully charged.
- Check to see shortage of battery power for the transmitter.
- Signal interference from other radios.

OPERATIONAL SAFETY

Radio controlled model cars are powered by quick discharge NiCd batteries which allow the cars to obtain high speeds. **Caution** is required when operating R/C cars.

Do not run R/C cars on the street.

Check to make sure no one else is on your frequency. If so do not turn your radio on.

If your car is stopped by an obstacle do not continue running the car. Remove the car manually. Failing to do so may ruin the motor and wiring.

Do not grab the tires while they are rotating.

Before connecting the NiCd battery, check that the speed control is in the neutral position.

The motor and receiver are powered by the same NiCd battery. As the battery lowers the receiver loses power resulting in the loss of control of the car. When the car slows down, stop, and recharge the battery.

Remove the NiCd battery from the car.

MOTOR CARE

BREAK-IN RUNNING

Breaking in your new motor is necessary to allow the brushes, commutator, and bushings to seat themselves into position. Break-in running should be done with no load placed on the motor; don't break it in while installed in your model. Since higher voltages tend to cause some vibration before break-in, the ideal break-in procedure is to run the motor at around 3 or 4 volts for a total period of 10 hours. If a source of 3 or 4 volts is unavailable, run the motor at a higher voltage for less time. Just remember, the lower the voltage, the better. Never exceed 7.2 volts for break-in.

After a particularly rough run in your model, the brushes and commutator may become dirty and start to bind. If this is the case, run the motor with a 7.2 volt battery for about 15-20 minutes with no load. This should restore the motor to its proper operating condition.

MAINTENANCE

To keep your new LeMans motor in top condition, keep it clean and inspect it often. The 240ST was designed for use with 6-cell battery packs. It is a good idea to avoid battery packs greater than 7.2 volts (6-cells). Using more voltage will shorten motor life.

Cleaning

- Since the LeMans 240ST is not designed to be disassembled, to clean the inside working parts, we suggest one of the new spray motor cleaners such as "REEDY IN A CAN" (follow the instructions supplied with the cleaner.) Never use spray lubricants such as WD-40 on your LeMans motor!
- Oil the front and rear bushings with a light machine oil such as 3-IN-1 Oil. Don't allow any oil to get into the inside of the motor and contaminate the commutator.
- Occasionally check the terminals for oxidation and other contaminants.

Changing the Brushes

- The motor brushes eventually will wear out. To replace them, slide the brush springs forward at the spring holder tabs and pull them back so that the brushes can be removed.
- Carefully remove the brushes and install the new ones. For best results, ask your hobby dealer only for Kyosho No. LM-05 brushes (2 per pack) and No. LM-07 brush springs (4 per pack).
- You will now have to break-in the motor again to allow the brushes to seat.

MAINTENANCE AFTER RUNNING THE CAR

Wipe the dirt off of the car.

Make sure all the switches of the radio control unit are off.

Clean and grease the moving parts periodically.

Check and tighten all nuts and screws.

Wipe the speed control off with a rag or a brush and check regularly.

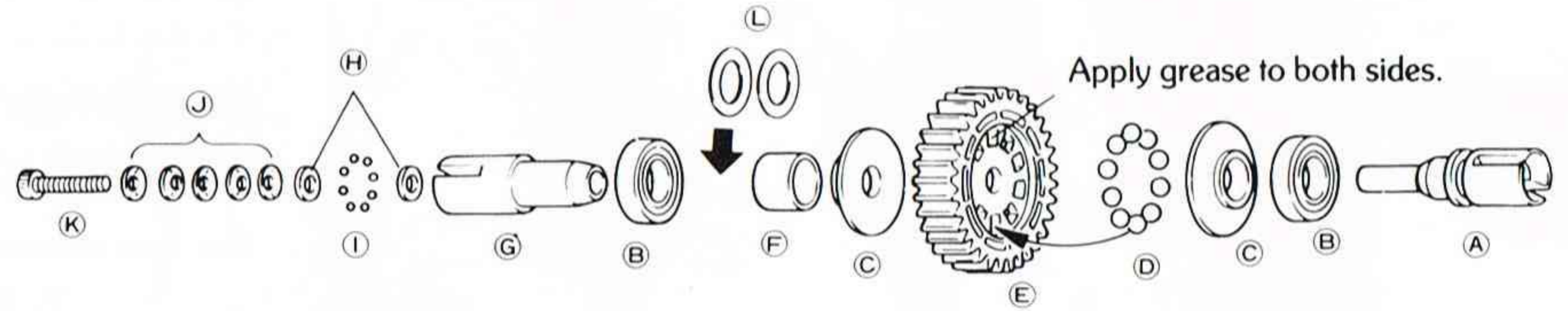
EXPLODED VIEW OF BALL DIFFERENTIAL AND PLATINUM SHOCKS

BALL DIFFERENTIAL

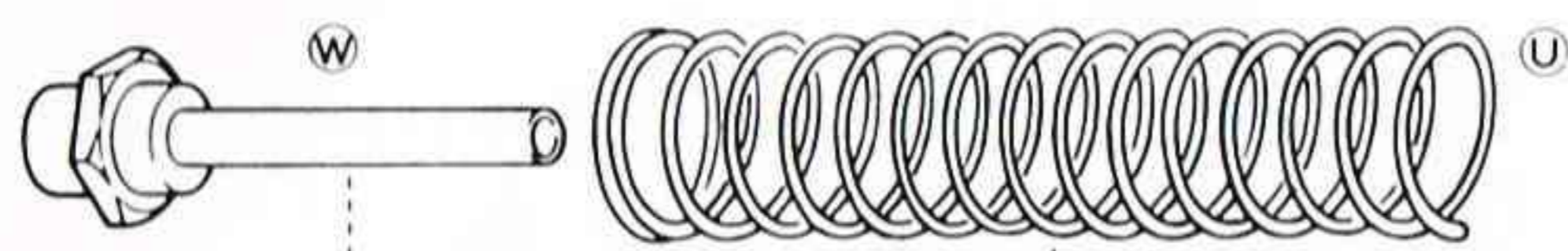
NO.	PARTS NAME	Q'TY
(A)	Diff. Shaft (B)	.1
(B)	8mm x 14mm Bearing	.2
(C)	Pressure Plate	.2
(D)	Diff. Balls	.10
(E)	Diff. Body	.1
(F)	Collar	.1
(G)	Diff. Shaft (A)	.1
(H)	Spacer	.2
(I)	Balls	.8
(J)	Cupped Washer	.5
(K)	M2.6 x 15 Cap Screw	.1
(L)	8mm x 12 Shim	.2

If there is play between (B) and (F) Insert two (L) shims.

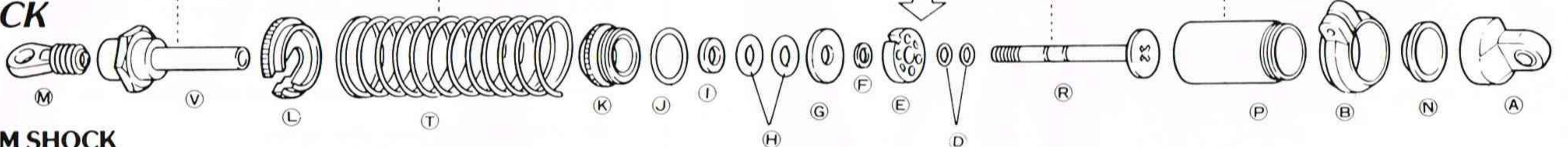
BALL DIFFERENTIAL



REAR SHOCK



FRONT SHOCK



PLATINUM SHOCK

NO.	PARTS NAME	Q'TY
(A)	Shock Cap	.4
(B)	Spring Stopper (A)	.4
(C)	M2 x 8 S/T Screw	.4
(D)	O Ring (S)	.8
(E)	Valve	.4
(F)	Washer (S)	.4
(G)	Washer (L)	.4

(H)	O Ring (M)	.8
(I)	O Ring Spacer	.4
(J)	O Ring (L)	.4
(K)	Lower Shock Cap	.4
(L)	Spring Stopper (B)	.4
(M)	Shock End	.4
(N)	Rubber Cap (Front,Thin)	.2
(O)	Rubber Cap (Rear,Thick)	.2

(P)	Cylinder (Front,Short)	.2
(Q)	Cylinder (Rear,Long)	.2
(R)	Main Piston (Front,Short)	.2
(S)	Main Piston (Rear,Long)	.2
(T)	Spring (Front,Short)	.2
(U)	Spring (Rear,Long)	.2
(V)	Sub. Piston (Front,Short)	.2
(W)	Sub. Piston (Rear,Long)	.2

PARTS LIST

No.	PARTS NAME	Q'ty	No.	PARTS NAME	Q'ty	No.	PARTS NAME	Q'ty	No.	PARTS NAME	Q'ty
1	Main Chassis	.1	27	Front Wheel	.2	53	Sponge Cap	.1	79	Upper Rod	.4
2	Ball Differential	.1	28	Final Pinion Gear	.1	54	Front Suspension Arm	.2	80	Ball Nut	.1
3	Universal Swing Shaft	.2	29	Pinion Gear (15T)	.1	55	Rear Suspension Arm	.2	81	5.8mm Ball (Silver)	.10
4	Platinum Shock (Frnt)	.2	30	Center Gear Shaft	.1	56	Front Bulk Head	.1	82	4.8mm Ball	.3
5	Platinum Shock (Rear)	.2	31	Drive Washer	.2	57	Rear Axle Stopper	.1	83	Susp.Shaft (D)	.2
6	4mm x 8mm Ball Bearing	.6	32	Counter Gear Shaft	.1	58	Rear Bulk Head	.1	84	King Pin	.2
7	5mm x 10mm Ball Bearing	.6	33	2mm x 11mm Pin	.1	59	Gear Cover	.1	85	Steering Rod	.1
8	Wing	.1	34	Front Wheel Shaft	.2	60	Front Bumper	.1	86	Speed Control Rod	.1
9	Rotary Speed Control	.1	35	Servo Saver Shaft	.2	61	Front Hub	.2	87	Center Rod	.1
10	240ST Motor	.1	36	Wing Post	.2	62	Knuckle Arm (L)	.1	88	Battery Holder	.2
11	Radio Plate	.1	37	Wing Stopper	.2	63	Knuckle Arm (R)	.1	89	Body	.1
12	Gear Box (L)	.1	38	O Ring (P3)	.1	64	Rear Hub	.2	90	Rear Tire	.2
13	Gear Box (R)	.1	39	Center Gear Collar	.1	65	Gear Box Hatch	.1	91	Front Tire	.2
14	Motor Cord	.1	40	5.8mm Ball (Black)	.6	66	Servo Saver (A)	.1	92	Decal	.1
15	Wing Wire	.1	41	Motor Plate	.1	67	Servo Saver (B)	.1	93	Shock Oil	.1
16	Gear Cover Seal	.1	42	Heat Sink (A)	.1	68	Servo Saver (C)	.1	94	E-Ring (E-2.5)	.10
17	Double Sided Tape	.1	43	Heat Sink (B)	.1	69	Servo Saver (D)	.1	95	E-Ring (E-3)	.3
18	Strap (S)	.2	44	Front Shock Stay	.1	70	Servo Saver Collar	.2	96	E-Ring (E-4)	.2
19	NiCd Strap	.2	45	Rear Shock Stay	.1	71	Servo Mounts	.4	97	Hook Pin	.2
20	Antenna Tube	.1	46	Front Stabilizer	.1	72	Body Mount Post	.1	98	Allen Wrench (1.5mm)	.1
21	Stabilizer Link (L)	.2	47	Rear Stabilizer	.1	73	Antenna Post	.1	99	Allen Wrench (2mm)	.1
22	Stabilizer Link (S)	.2	48	Rear Shaft (B)	.2	74	Ball End (L)	.12	100	Body Pin	.3
23	Stabilizer Stopper	.2	49	Center Gear	.1	75	Ball End (S)	.2			
24	Shock Collar	.4	50	Counter Gear	.1	76	Susp.Shaft (C)(Silver)	.2			
25	Spring Spacer	.4	51	Pivot Ball	.2	77	Susp.Shaft (A)(Black)	.2			
26	Rear Wheel	.2	52	Stabilizer Pivot Ball	.4	78	Tie Rod	.2			

LIST OF BAGGED PARTS

Bag	Key No.	Part Name	Q'ty	Step Used In
BLISTER PACK	1	Main Chassis	1	5
	2	Ball Differential	1	3
	3	Universal Swing Shaft	2	6
	4	Platinum Shock (Front)	2	8
	5	Platinum Shock (Rear)	2	8
	6	4mm x 8mm Bearing	6	27 31
	7	5mm x 10mm Bearing	6	1 3 6
	9	Rotary Speed Control	1	22
	10	LeMans 240ST Motor	1	28
	TUL-2	11	Radio Plate	1
12		Gear Box (L)	1	3
13		Gear Box (R)	1	1
14		Motor Cord	1	28
15		Wing Wire	1	35
16		Gear Cover Seal	1	29
17		Double Sided Tape	1	32
18		Strap (S)	2	36
19		NiCd Strap	2	36
20		Antenna Tube	1	32
21		Stabilizer Link (L)	2	9
22		Stabilizer Link (S)	2	13
23		Stabilizer Stopper	2	4
24		Shock Collar	4	9 15
25		Spring Spacer	4	
93		Shock Oil	1	8
		Screw Cement	1	
	Silicone Grease	1		
	Valves	4		
	O Ring (P2)	4		
TUL-3	26	Rear Wheel	2	30
	27	Front Wheel	2	30
TUL-4	28	Final Pinion	1	2
	29	Pinion Gear	1	28
	30	Center Gear Shaft	1	26
	31	Drive Washer	2	31
	32	Counter Gear Shaft	1	1
	33	2mm x 11mm Pin	1	1
	34	Front Wheel Shaft	2	10

Bag	Key No.	Part Name	Q'ty	Step Used In
TUL-4	35	Servo Saver Shaft	2	17
	36	Wing Post	2	22
	37	Wing Stopper	2	35
	38	O Ring (P3)	1	27
	39	Center Gear Collar	1	27
	40	5.8mm Ball (Black)	6	4 13
TUL-5	41	Motor Plate	1	1
	42	Heat Sink (A)	1	26
	43	Heat Sink (B)	1	26
	44	Front Shock Stay	1	11
	45	Rear Shock Stay	1	4
	46	Front Stabilizer	1	13
	47	Rear Stabilizer	1	4
	48	Suspension Shaft (B)	2	6
	49	Center Gear	1	27
	50	Counter Gear	1	1
	51	Pivot Ball	2	6
	52	Stabilizer Pivot Ball	4	9 13
	53	Sponge Cap	1	
TUL-6	54	Front Suspension Arm	2	12
	55	Rear Suspension Arm	2	6
	56	Front Bulk Head	1	11
	57	Rear Axle Stopper	1	7
	58	Rear Bulk Head	1	4
	59	Gear Cover	1	29
	60	Bumper	1	14
	61	Front Hub	2	10
	62	Knuckle Arm (L)	1	10
	63	Knuckle Arm (R)	1	10
	64	Rear Hub	2	6
	65	Gear Box Hatch	1	5
	66	Servo Saver (A)	1	16
	67	Servo Saver (B)	1	16
	68	Servo Saver (C)	1	16
	69	Servo Saver (D)	1	16
	70	Servo Saver Collar	2	17
	71	Servo Mounts	4	20 23
	72	Body Mount Post	1	22
	73	Antenna Post	1	22

LIST OF BAGGED PARTS

Bag	Key No.	Part Name	Q'ty	Step Used In
TUL-7	74	Ball End (L)	12	4 11 18
	75	Ball End (S)	2	20 24
	76	Suspension Shaft (C) (Silver)	2	12
	77	Suspension Shaft (A) (Black)	2	6
	78	Tie Rod	2	18
	79	Upper Rod	4	4 11
	80	Ball Nut	1	16
	81	5.8mm Ball (Silver)	10	4 11
	82	4.8mm Ball	3	13 22
	83	Suspension Shaft (D)	2	12
	84	King Pin	2	10
	85	Steering Rod	1	20
	86	Speed Control Rod	1	24
	87	Center Rod	1	16
88	Battery Holder	2	36	
	8	Wing	1	33
	89	Body	1	33
	90	Rear Tire	2	30
	91	Front Tire	2	30
	92	Decal	1	35
		Instruction	1	
TUL-1	94	E-Ring (E-2.5)	10	
	95	E-Ring (E-3)	3	
	96	E-Ring (E-4)	2	
	97	Hook Pin	2	29
	98	Allen Wrench (1.5mm)	1	
	99	Allen Wrench (2mm)	1	

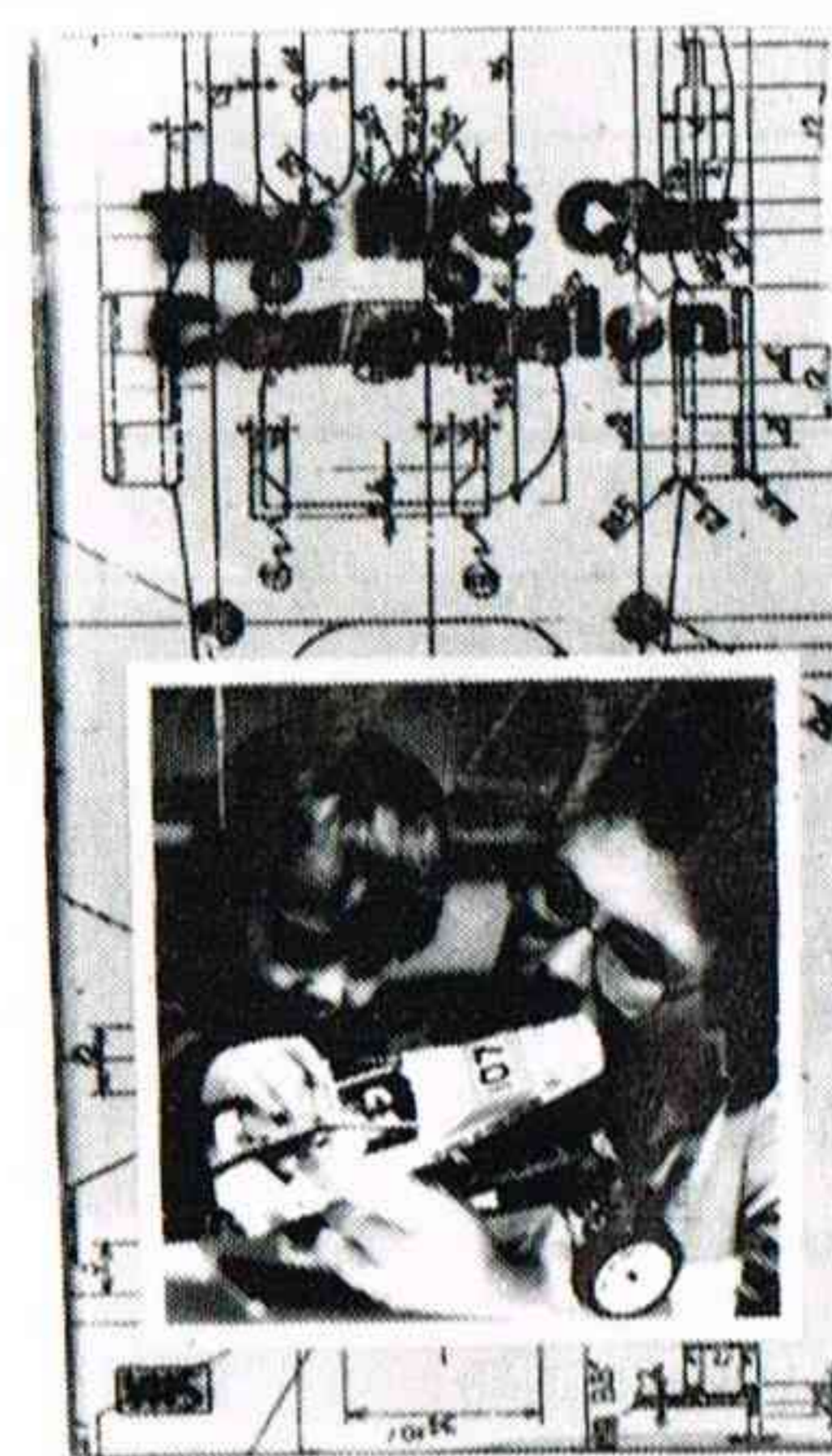
Bag	Key No.	Part Name	Q'ty	Step Used In
TUL-1	100	Body Pin	3	37
		M3 x 3 Set Screw	7	
		M4 x 4 Set Screw	1	
		M2 x 10 Screw	2	
		M3 x 10 Screw	2	
		M3 x 33 Screw	3	
		M2 x 8 S/T Screw	1	
		M3 x 18 S/T Screw	1	
		M4 x 8 F/H Screw	10	
		M4 x 12 F/H Screw	4	
		M2.6 x 15 F/H Screw	6	
		M3 x 6 F/H Screw	8	
		M3 x 12 F/H Screw	6	
		M3 x 15 F/H Screw	2	
		M2.6 x 6 P/H Screw	3	
		M3 x 6 P/H Screw	8	
		M3 x 18 P/H Screw	6	
		M3 x 35 P/H Screw	1	
		M2.6 x 6 S/T P/H Screw	3	
		M3 x 8 S/T P/H Screw	15	
		M4 x 8 Screw	2	
		M2.6 Nut	10	
		M3 Nut	11	
		M3 Nylon Nut	4	
		M4 Nylon Nut	4	
		M3 Washer	4	
		M4 Washer	4	
		8mm x 12mm Shim	2	

SUGGESTED READING



A wealth of hints, tips and general information about R/C cars is available at your favorite hobby store. We suggest the "Completely Cars" book by Harry Higley which is packed with hundreds of photos and great "Tech-Tips". "R/C Car Action", a magazine published quarterly by Air-Age Publications, will keep you on top of all the latest developments in the R/C car hobby.

SUGGESTED VIEWING



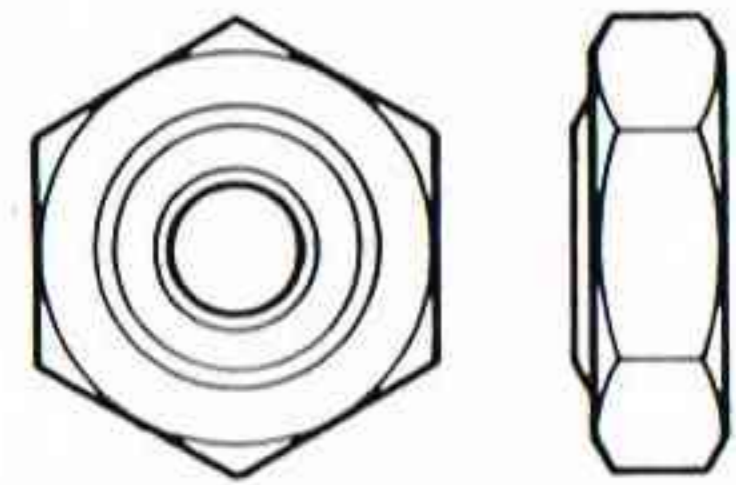
The **Milt Car Video** is a complete guide for the car buyer. It covers assembly, operation, and repair of cars and buggies. Of special interest to you will be the appearances throughout the tape by nationally recognized car experts, offering personal racing tips that only they know – and that R/C enthusiasts won't find anywhere else.

PURCHASING PARTS FOR YOUR KIT

You can purchase replacement and optional parts for your kit. All of the parts identified by key numbers (see page 20 for complete list) are usually not available singularly, but we offer these parts in convenient parts "packs" which can be purchased separately. To figure out which parts pack you need,

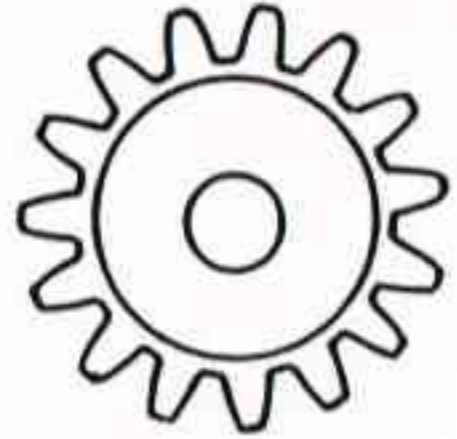
find the key number for that part within the manual. Then consult our parts pack guide below. When referring to the parts you need, always use the **Parts Pack Number**. For instance, if you need a Center Gear Shaft (Key #30) ask your dealer for Kyosho Parts Pack UM-05 (Gear Shaft Set).

OT-019 DRIVE WASHER



31 Drive Washer (4)

OT-024 PINION GEAR



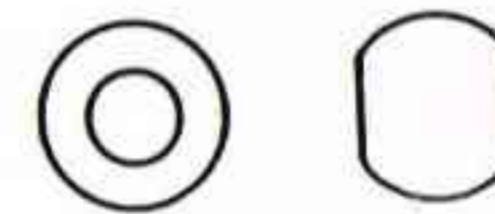
29 Pinion Gear (1)

OT-029 O-RING



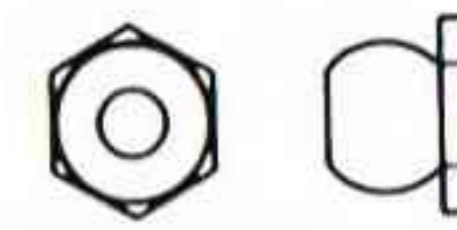
38 O-Ring (P3) (10)

OT-032 5.8mm BALL



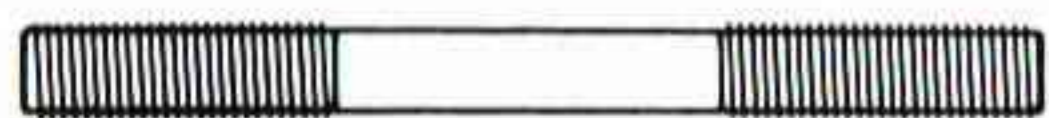
81 5.8mm Ball (10)

OT-033 BALL NUT

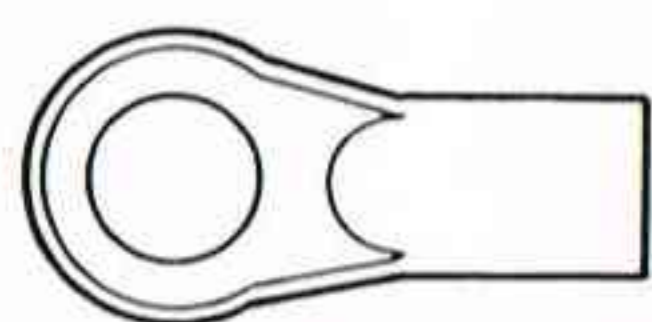


80 Ball Nut (10)

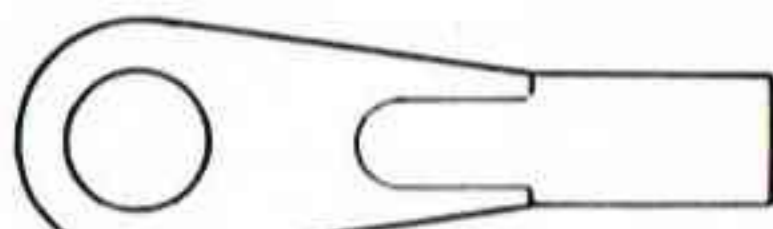
OT-035 UPPER ROD SET



79 Upper Rod (4)



74 Ball End (L) (8)



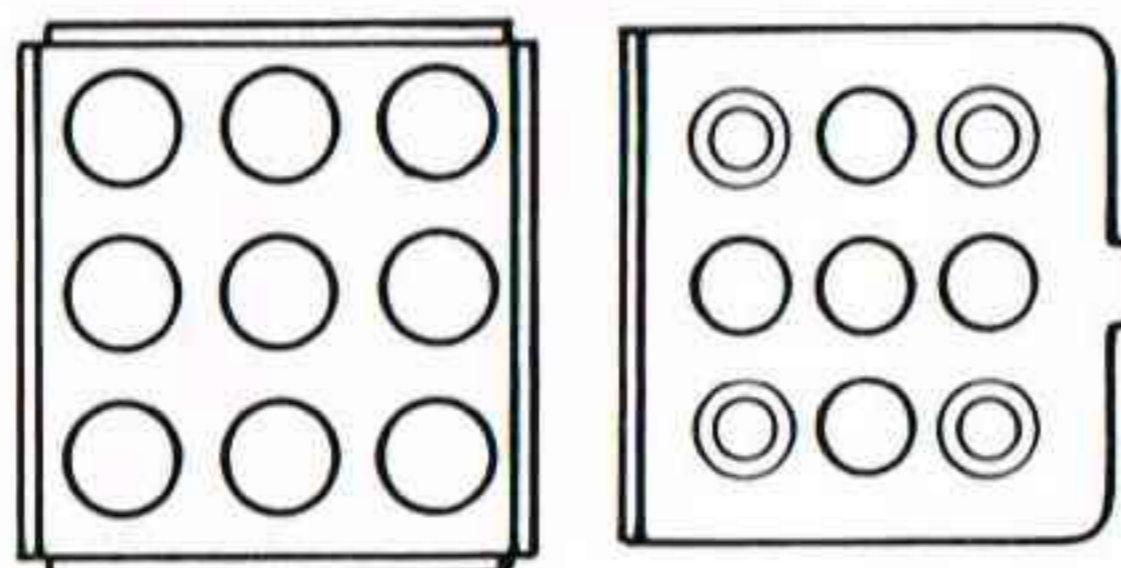
75 Ball End (S) (4)

OT-039 E-RING



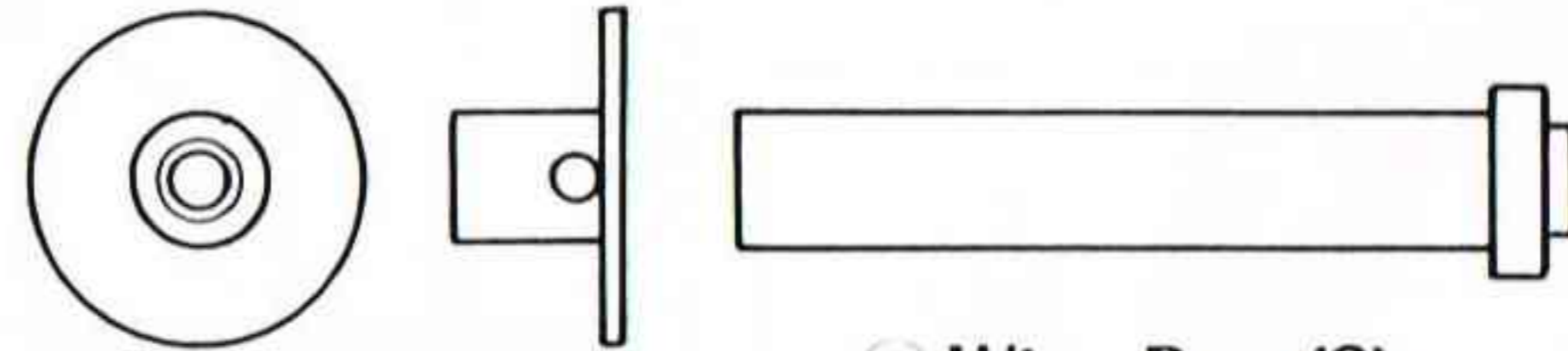
94 E-Ring (E-2.5) (10)

OT-072 HEAT SINK



42 43 Heat Sink (1)

OT-065 WING STAY SET



37 Wing Stopper (2)

36 Wing Post (2)

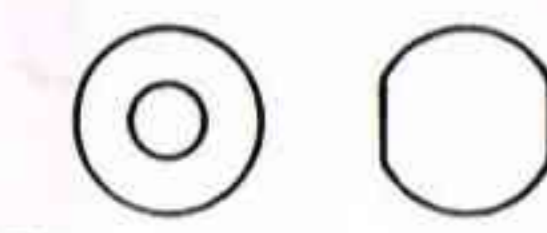
15 Wing Wire (1)

OT-076 HARD FINAL PINION GEAR



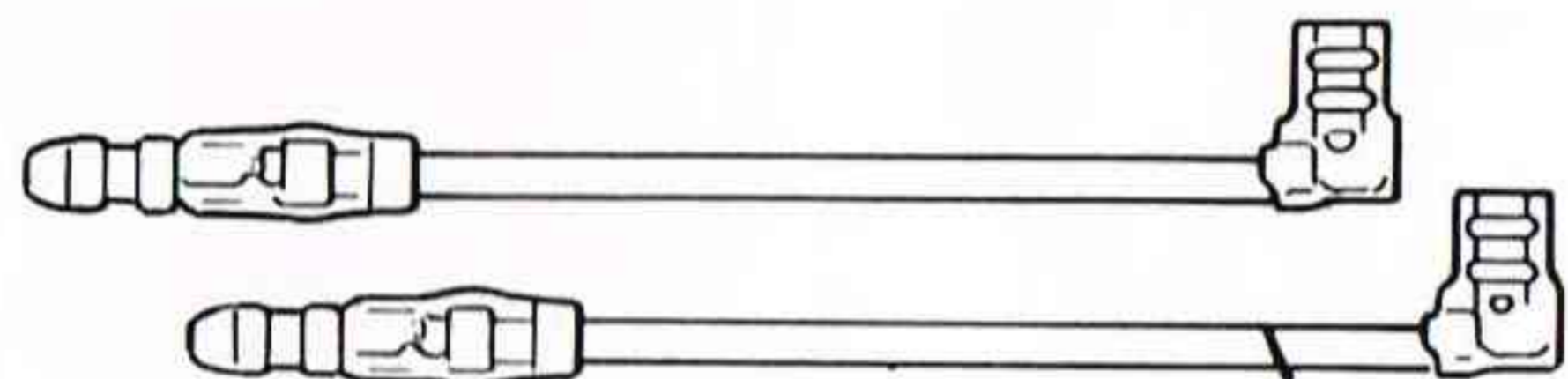
28 Hard Final Pinion Gear

OT-101 5.8mm BALL



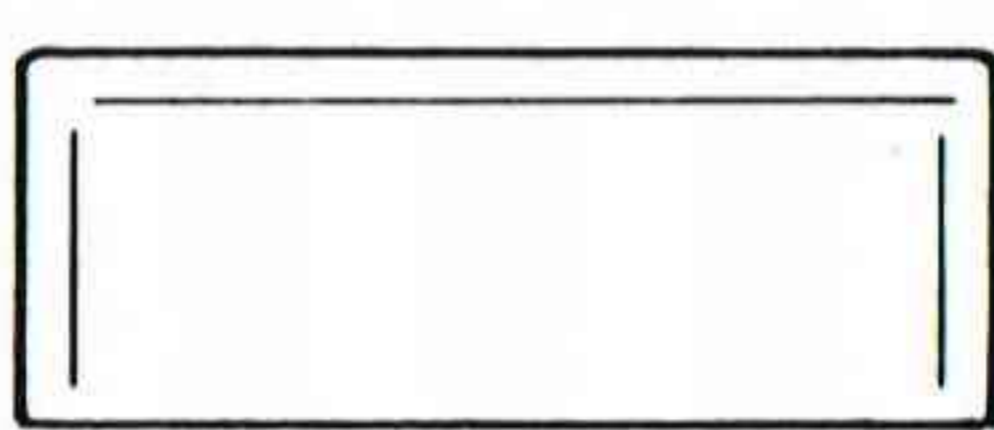
40 5.8mm Ball (Black) (10)

OT-079 CORD SET



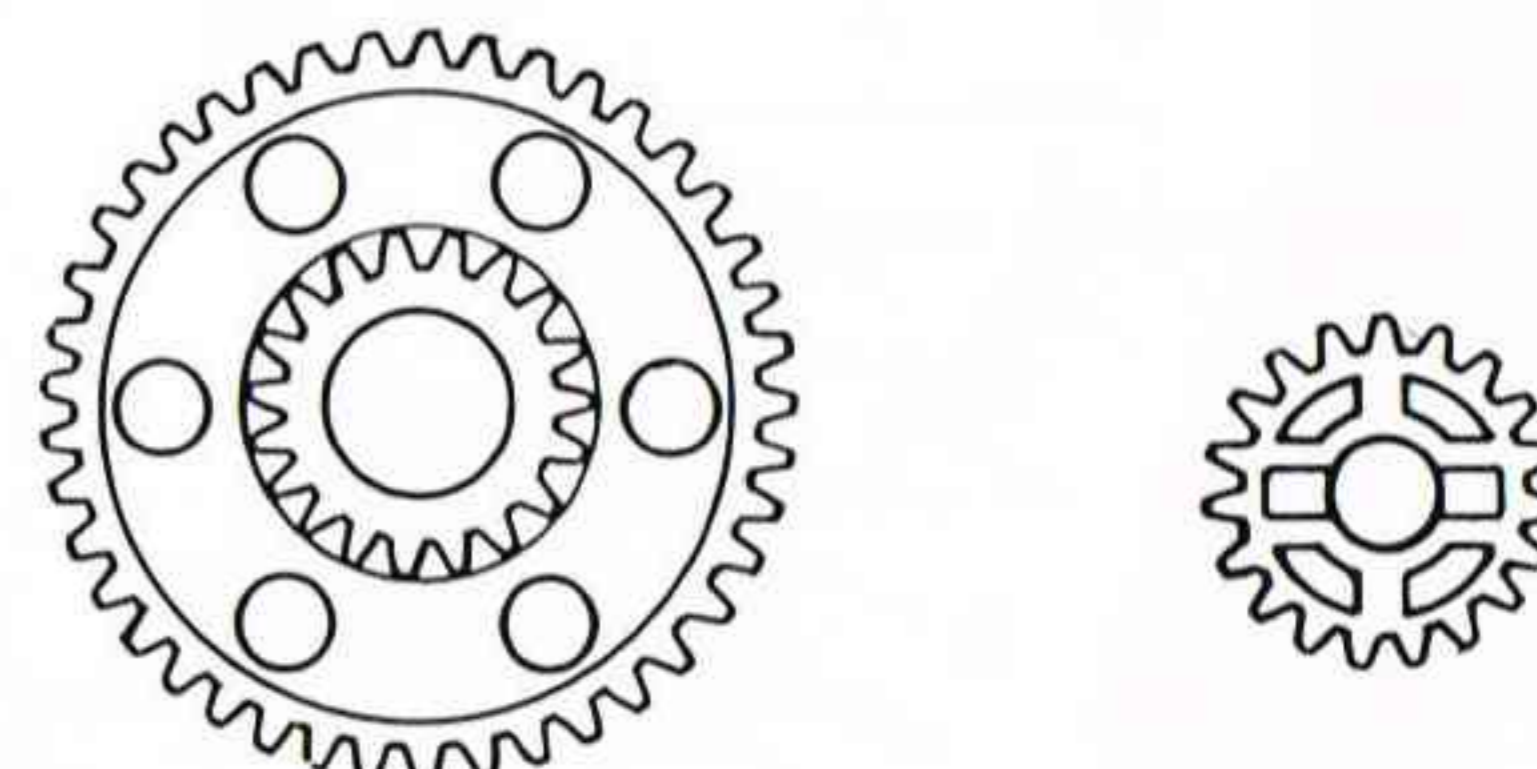
14 Motor Cord Set (1) Set

OT-107 WING



8 Wing (1)

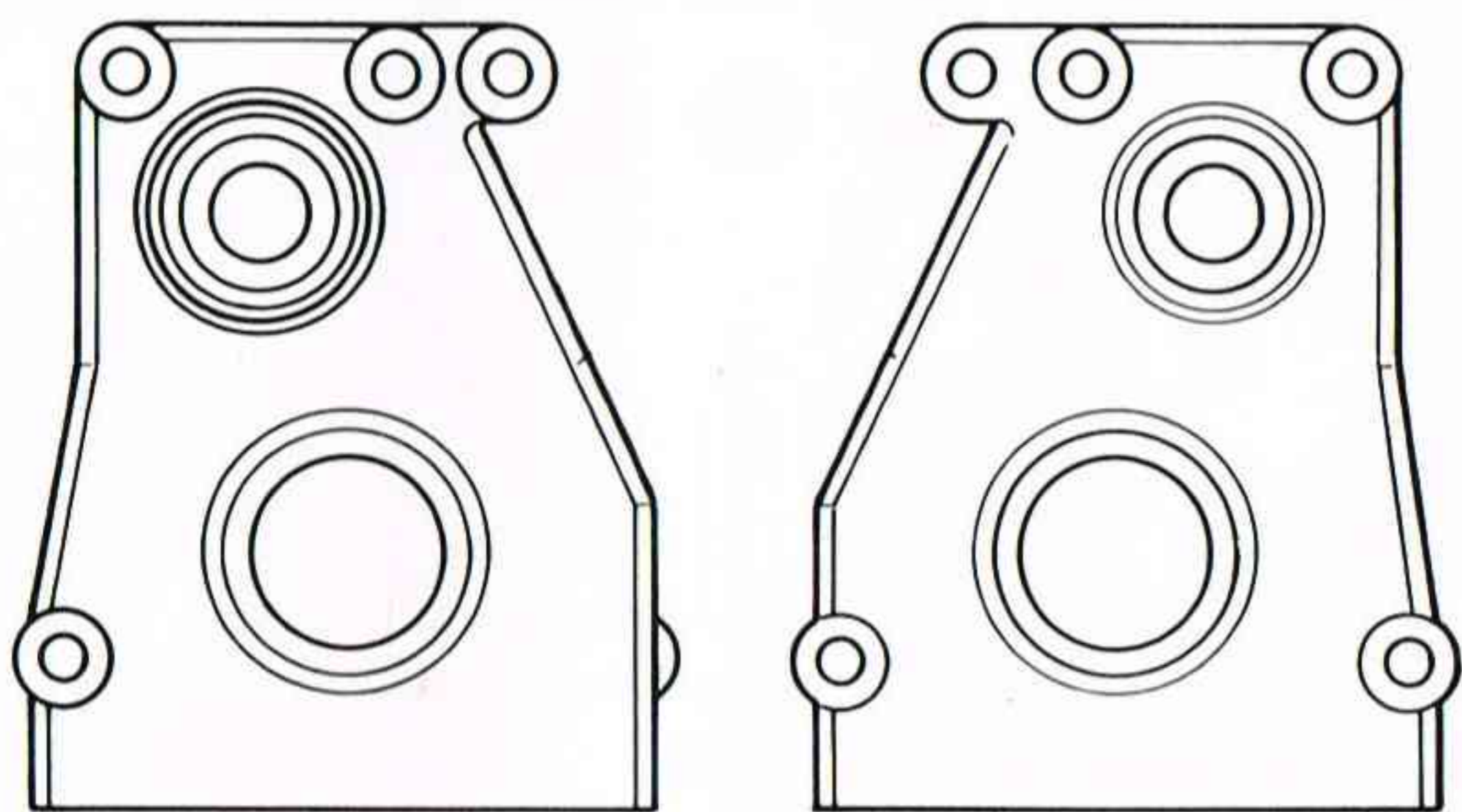
UM-01 GEAR SET



49 Center Gear (1)

50 Counter Gear (1)

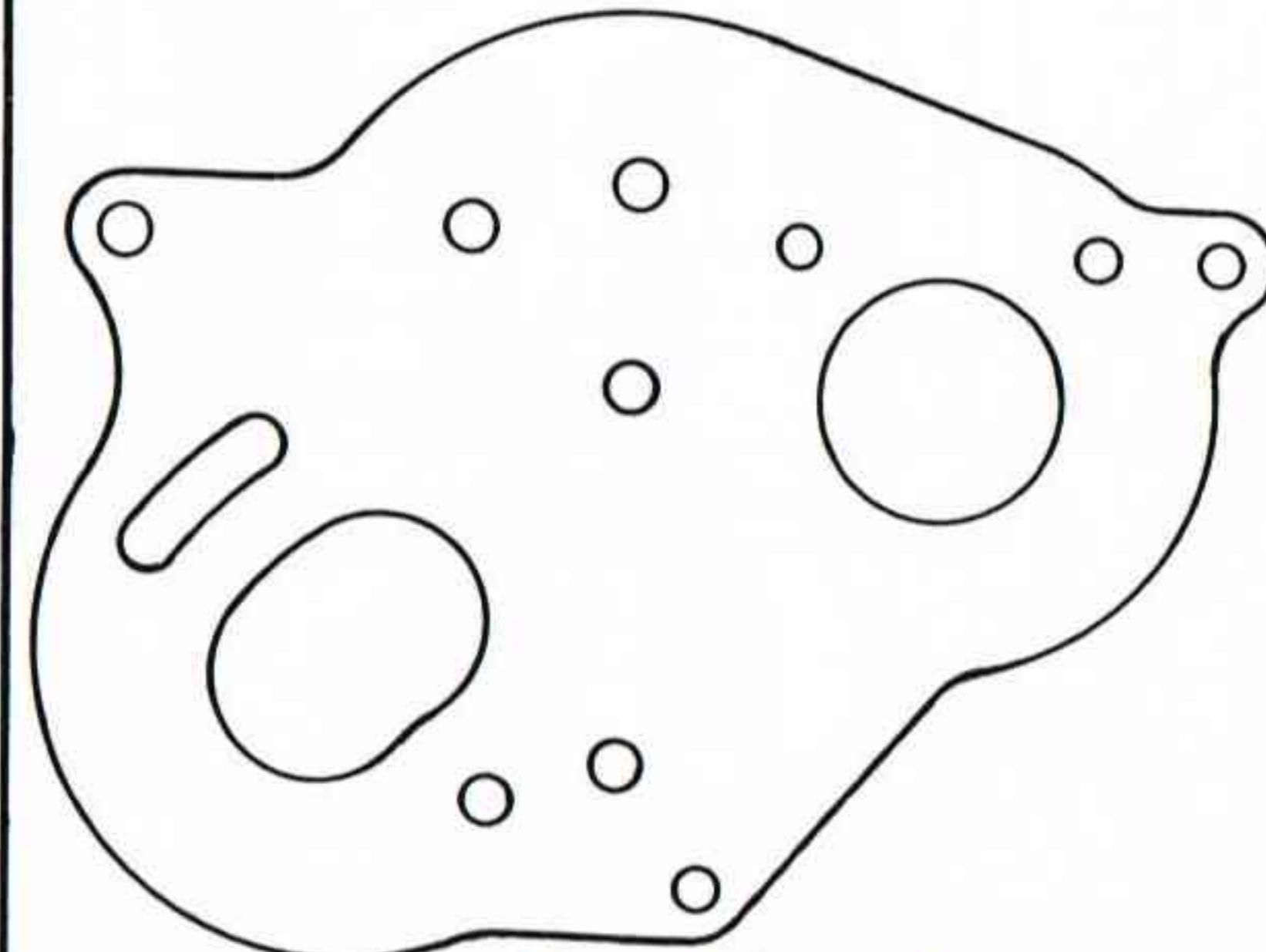
UM-03 GEAR BOX



13 Gear Box (R) (1)

12 Gear Box (L) (1)

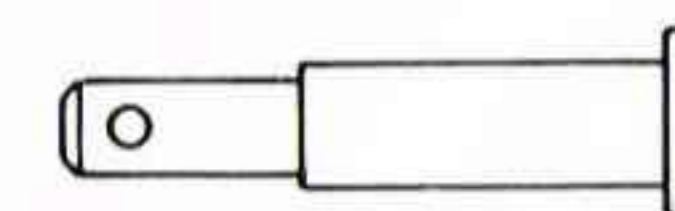
UM-04 MOTOR PLATE



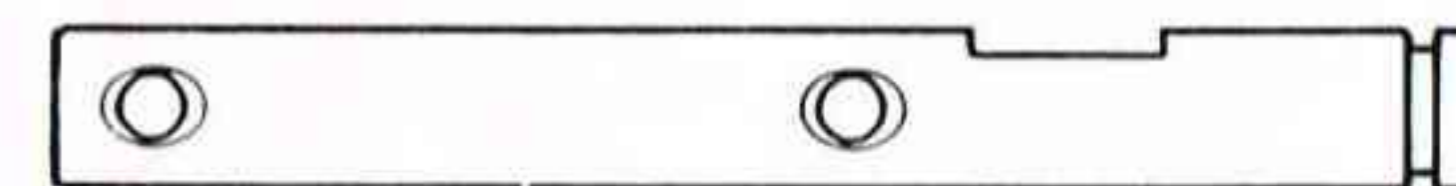
41 Motor Plate (1)

UM-05 GEAR SHAFT SET

33 2mm x 11mm Pin (2)

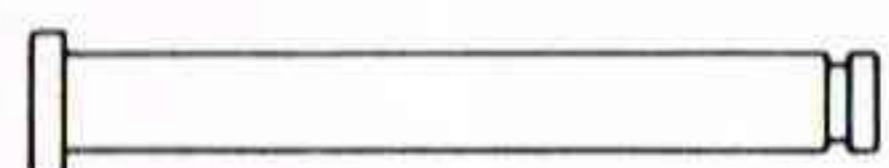


30 Center Gear Shaft (1)

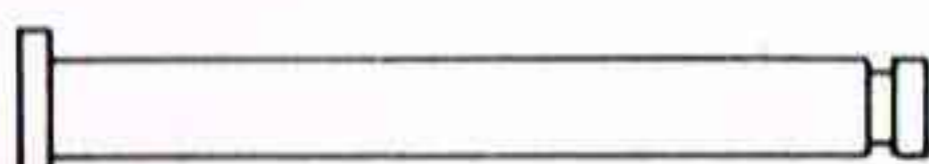


32 Counter Gear Shaft (1)

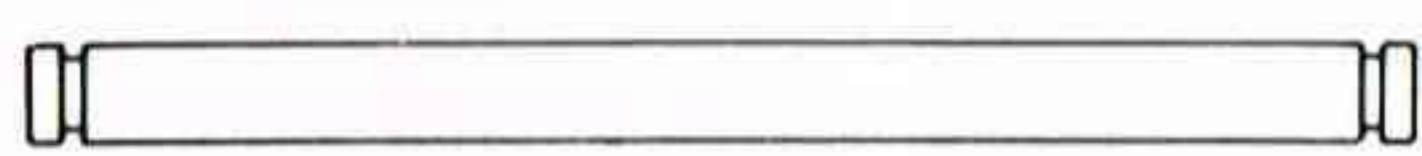
UM-07 SUSPENSION SHAFT SET



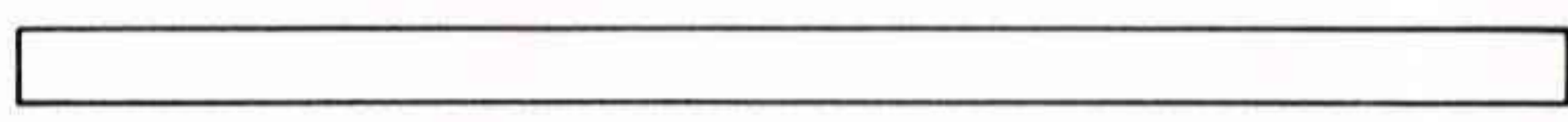
76 Susp. Shaft (C) (2)



77 Susp. Shaft (A) (2)

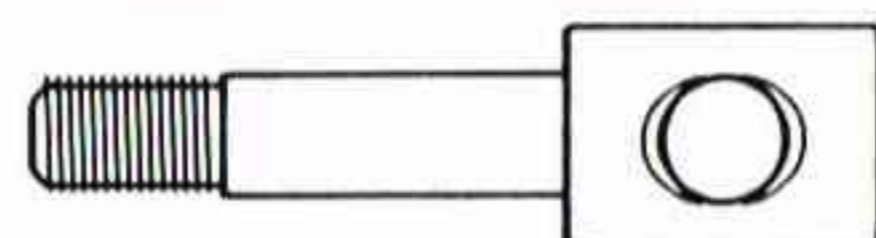


83 Susp. Shaft (D) (2)

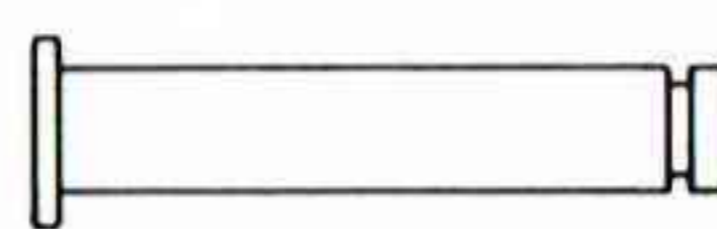


48 Susp. Shaft (B) (2)

UM-08 FRONT SHAFT SET

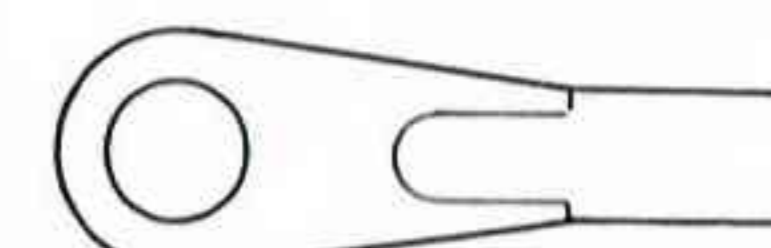


34 Front Wheel Shaft (2)

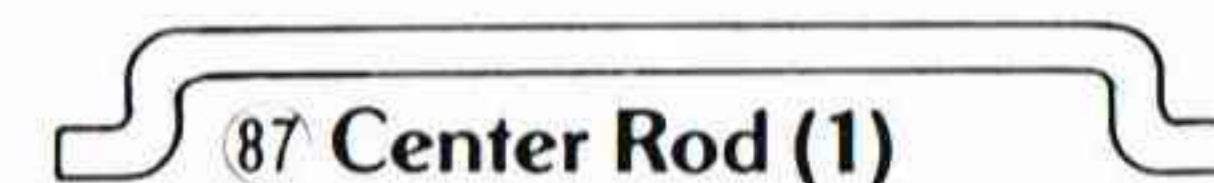


84 King Pin (2)

UM-09 ROD SET



75 Ball End (S) (2)



87 Center Rod (1)

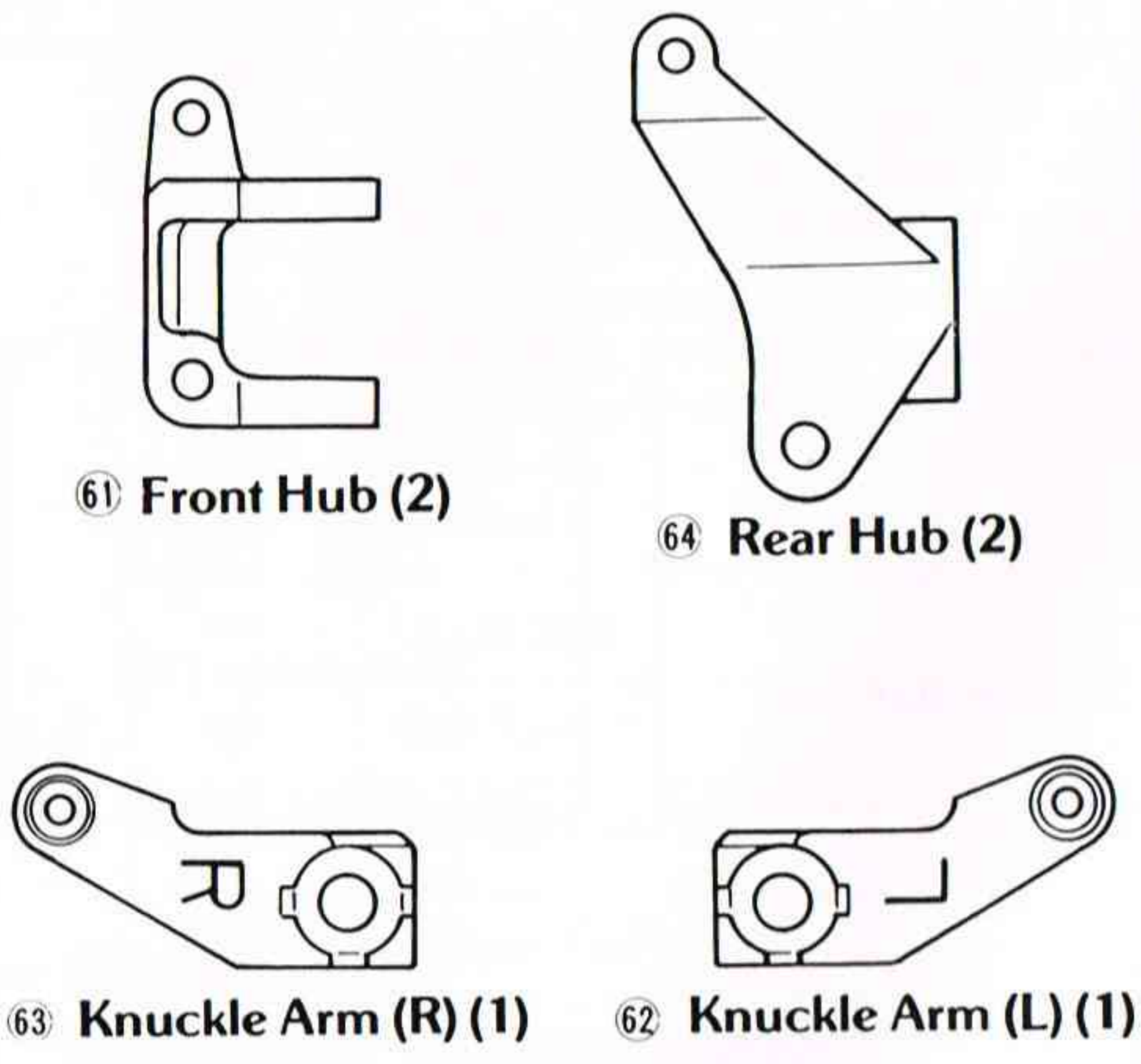


85 Steering Rod (1)



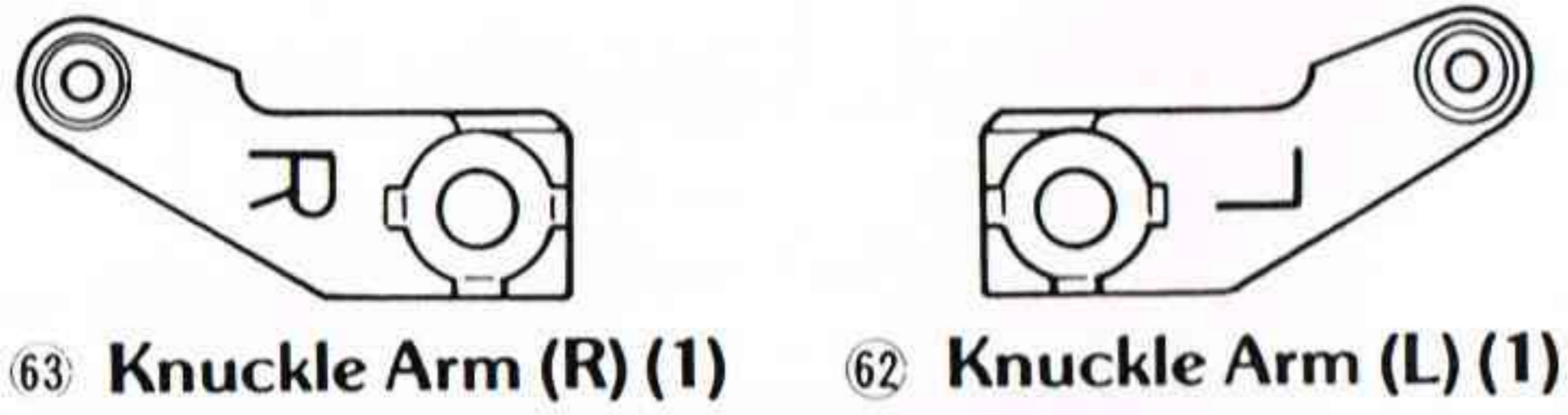
86 Speed Control Rod (1)

UM-11 UP-RIGHT SET



61 Front Hub (2)

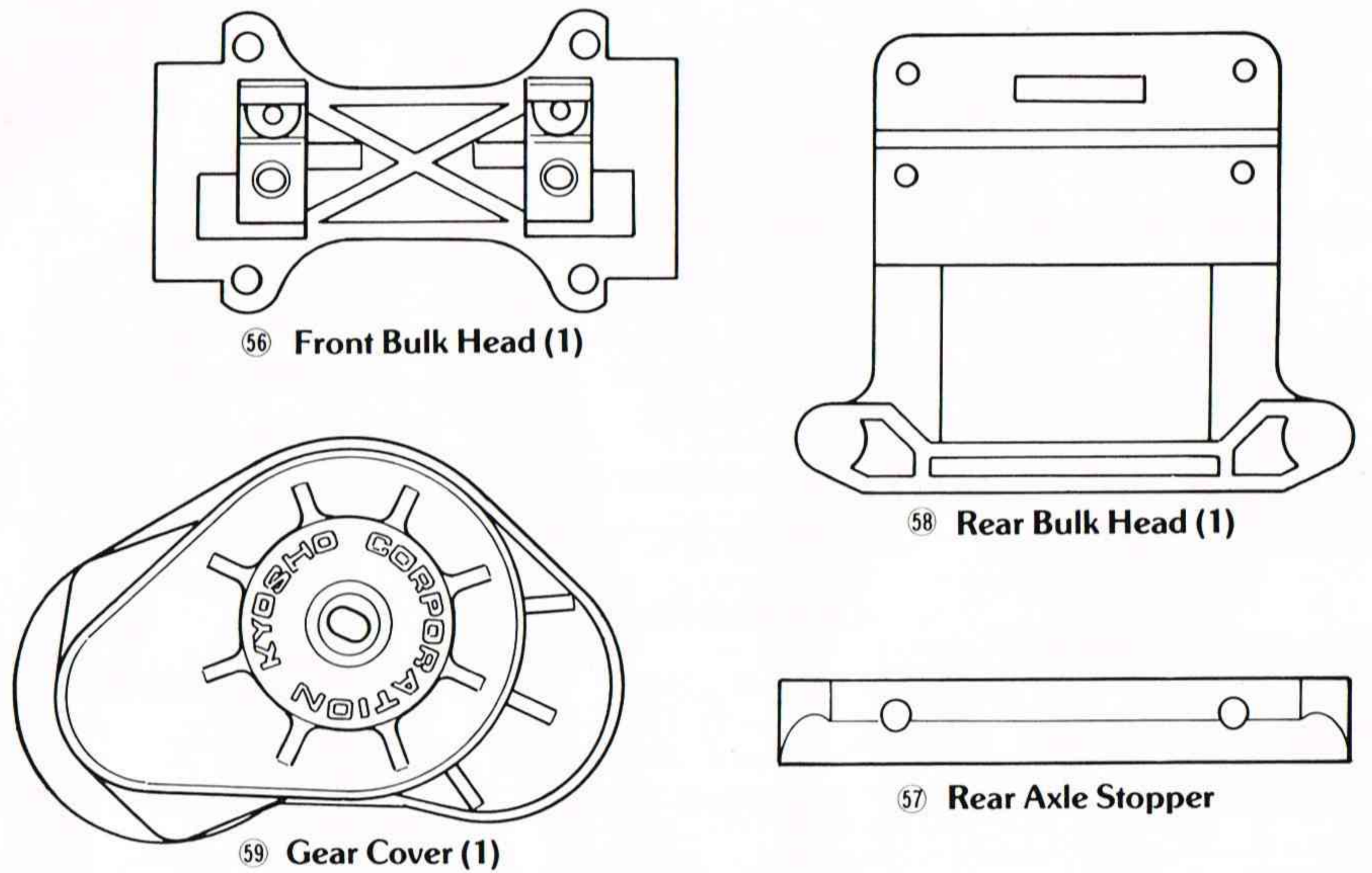
64 Rear Hub (2)



63 Knuckle Arm (R) (1)

62 Knuckle Arm (L) (1)

UM-12 BULK HEAD SET



56 Front Bulk Head (1)

58 Rear Bulk Head (1)

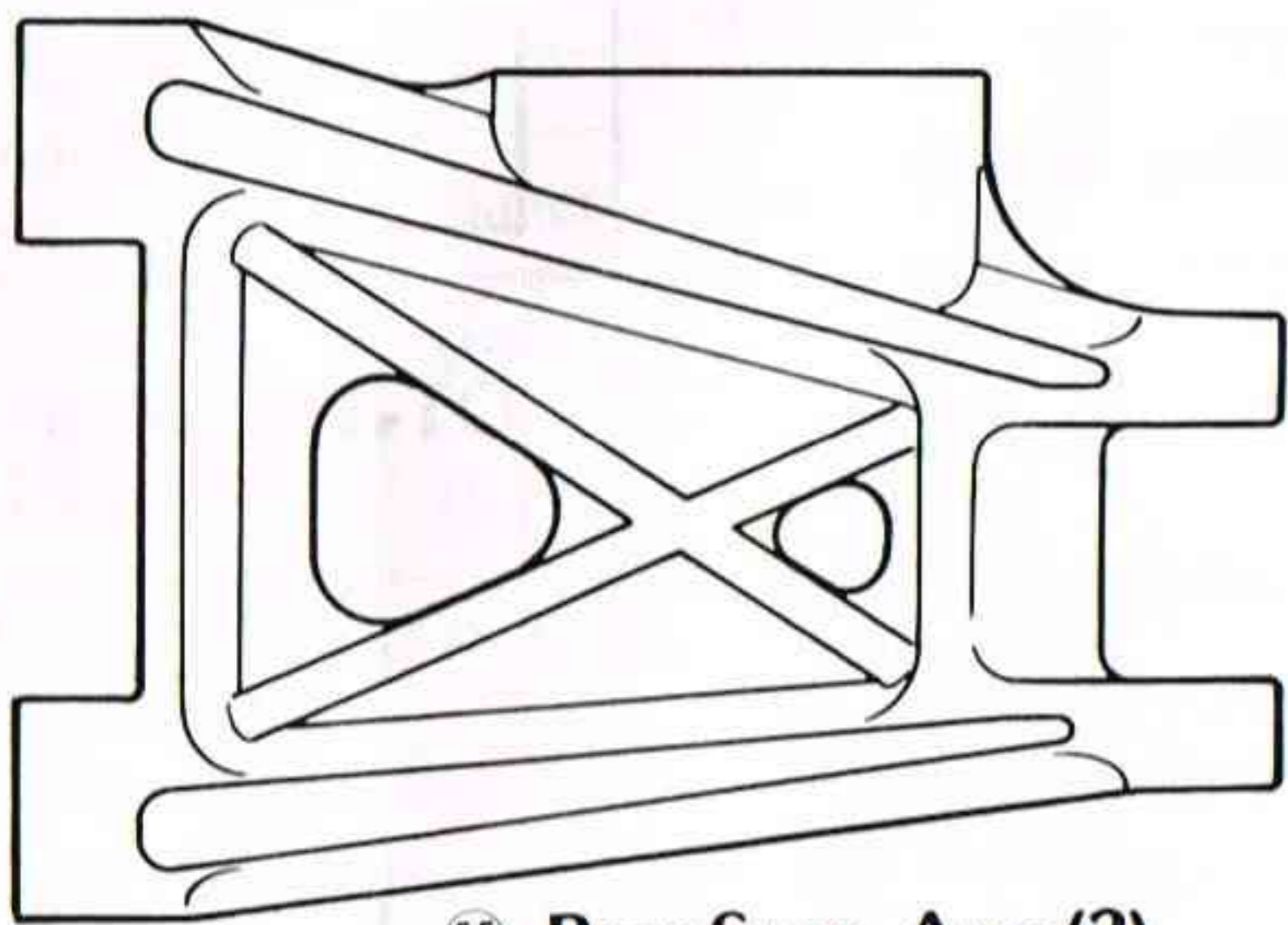
59 Gear Cover (1)

57 Rear Axle Stopper

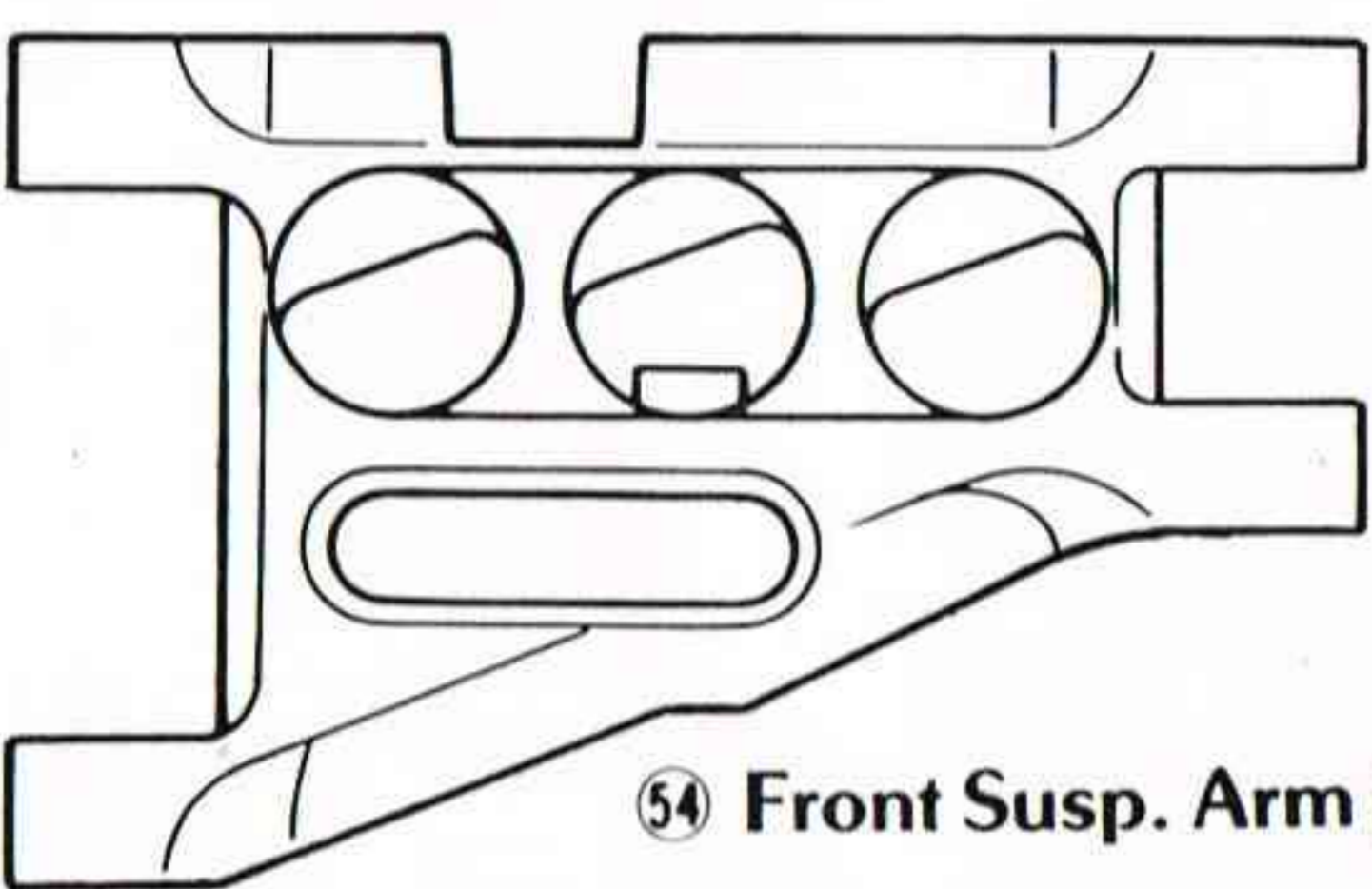


16 Gear Cover Seal (1)

UM-13 SUSPENSION ARM SET

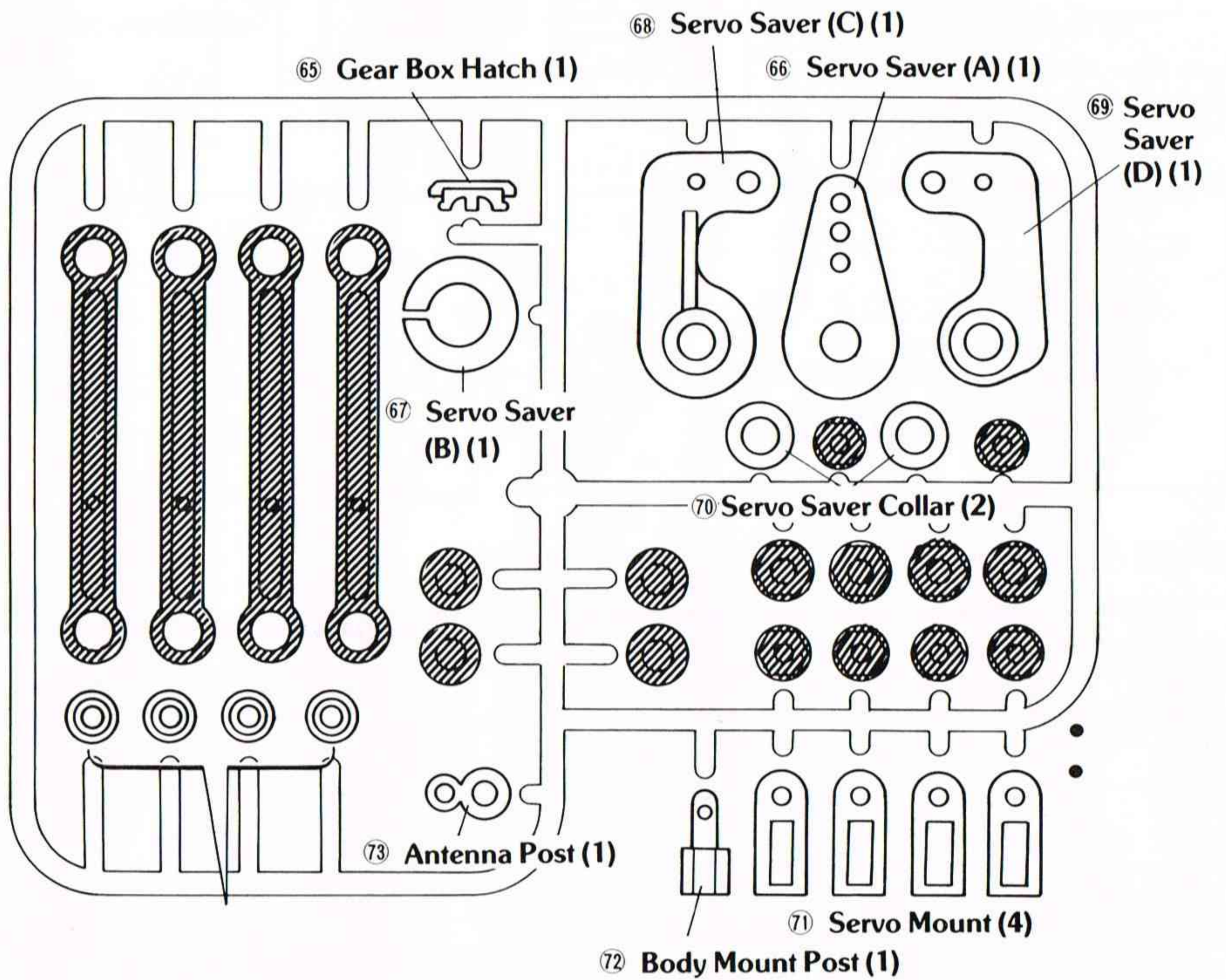


55 Rear Susp. Arm (2)



54 Front Susp. Arm (2)

UM-14 SERVO SAVER SET



65 Gear Box Hatch (1)

68 Servo Saver (C) (1)

66 Servo Saver (A) (1)

69 Servo Saver (D) (1)

67 Servo Saver (B) (1)

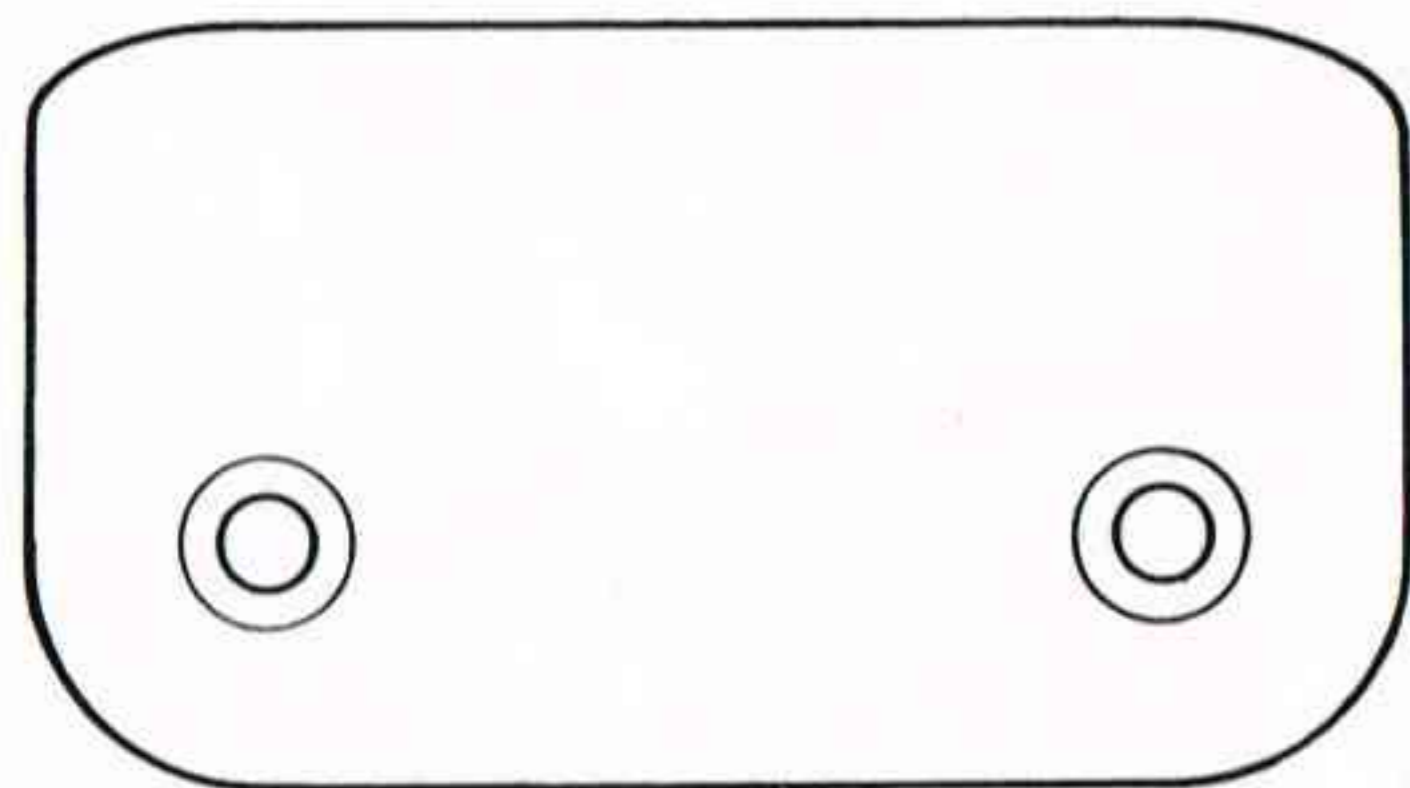
70 Servo Saver Collar (2)

73 Antenna Post (1)

71 Servo Mount (4)

72 Body Mount Post (1)

UM-21 FRONT BUMPER



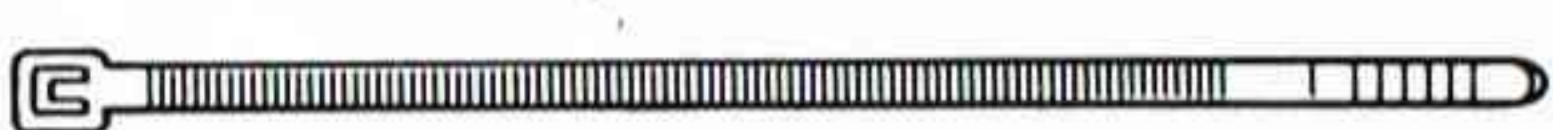
60 Front Bumper (1)

EP-22 HOOK PIN



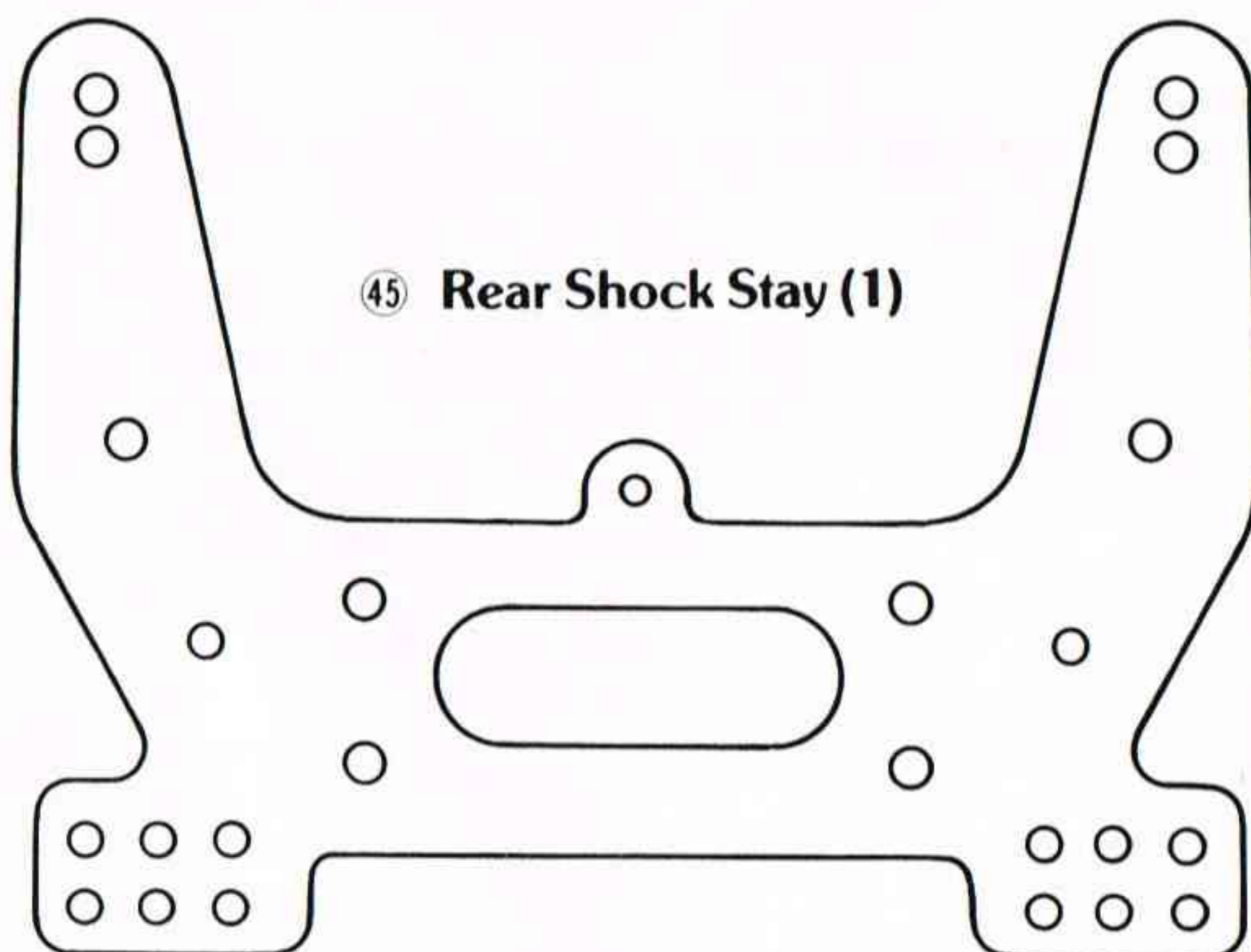
97 Hook Pin (5)

EF-037 STRAP

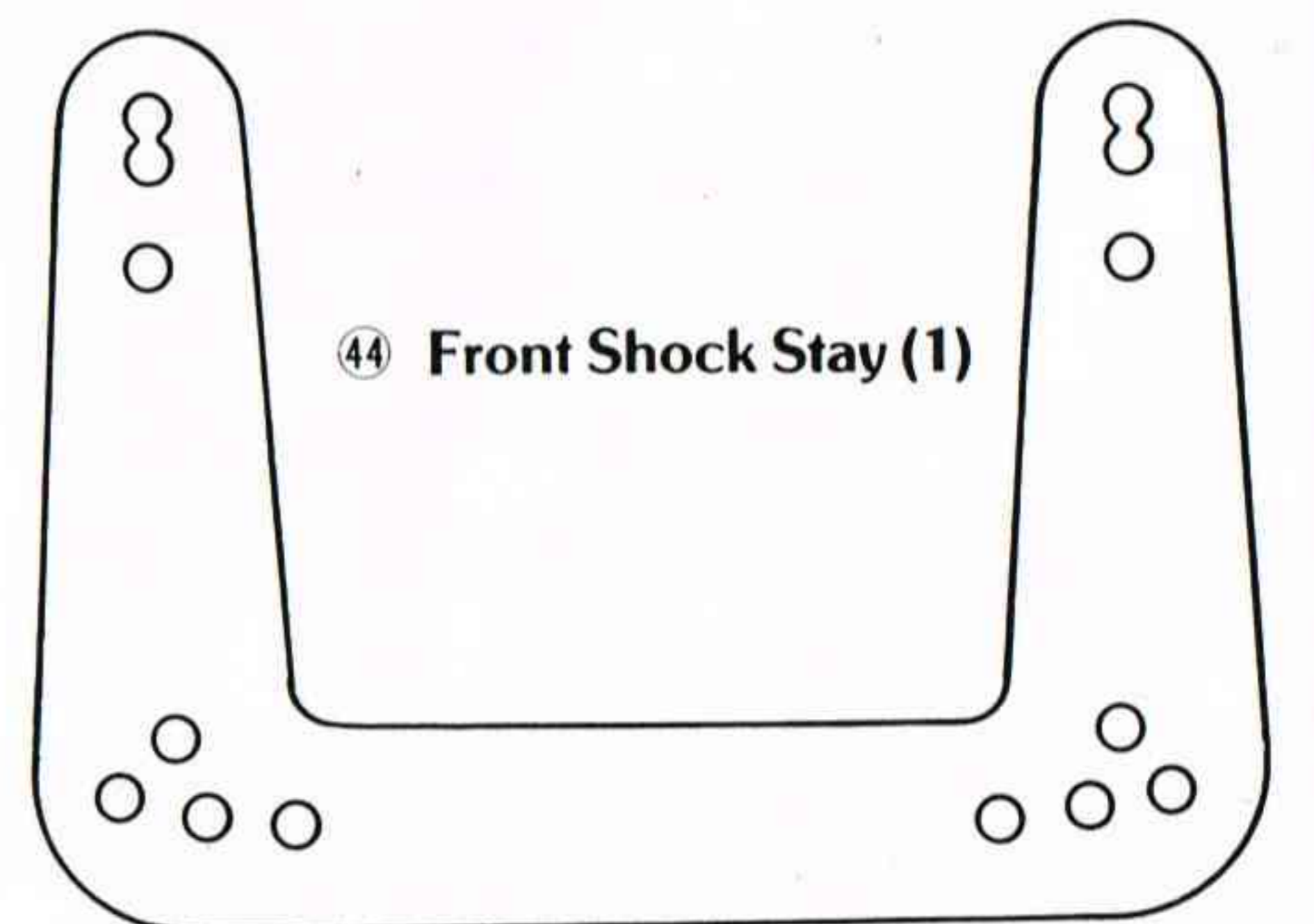


18 Strap (S) (6)

UM-26 SPECIAL SHOCK STAY

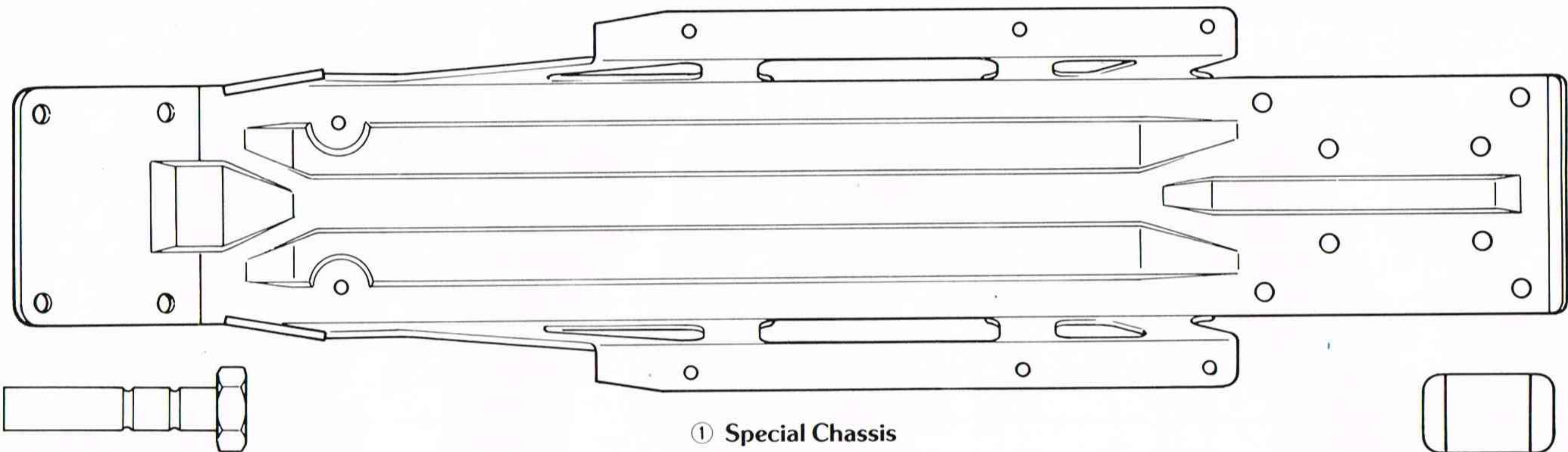


45 Rear Shock Stay (1)

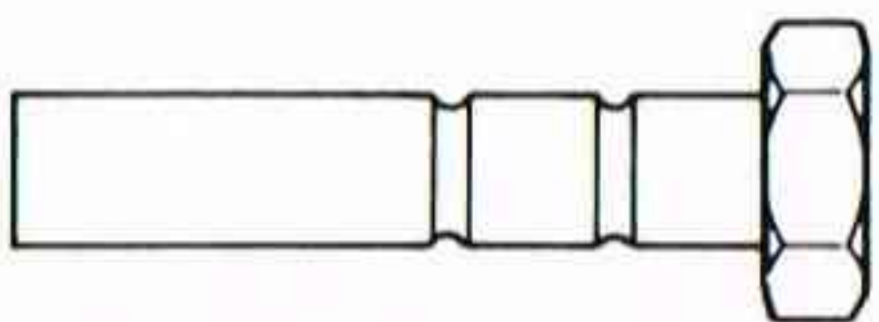


44 Front Shock Stay (1)

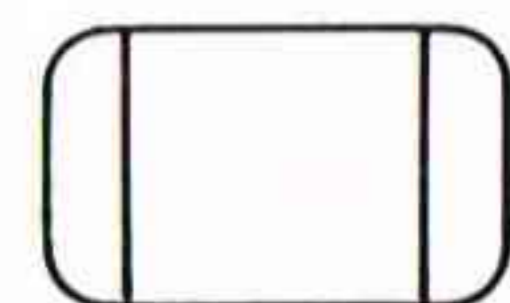
UM-27 SPECIAL CHASSIS



① Special Chassis



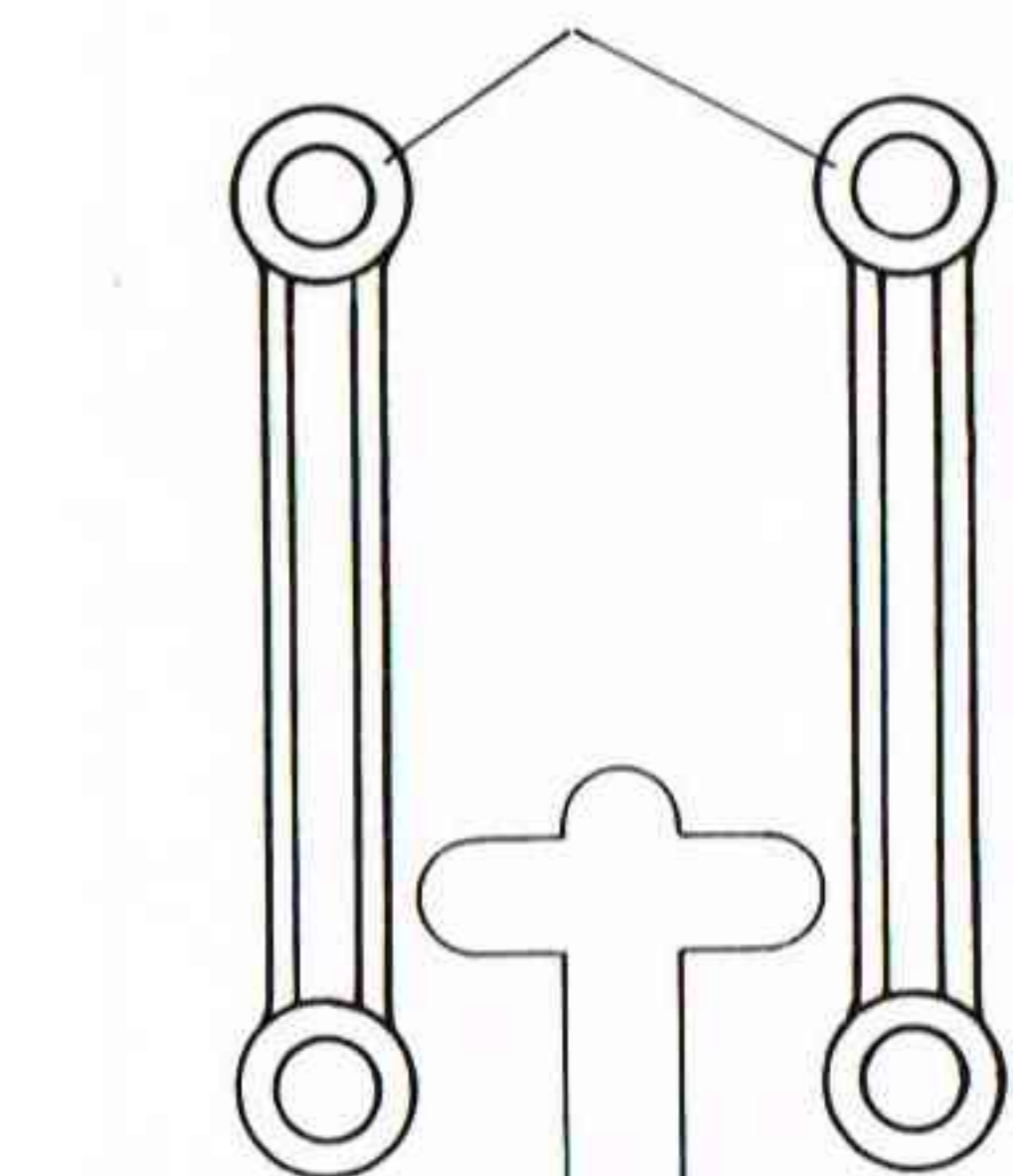
③⑤ Servo Saver Shaft (2)



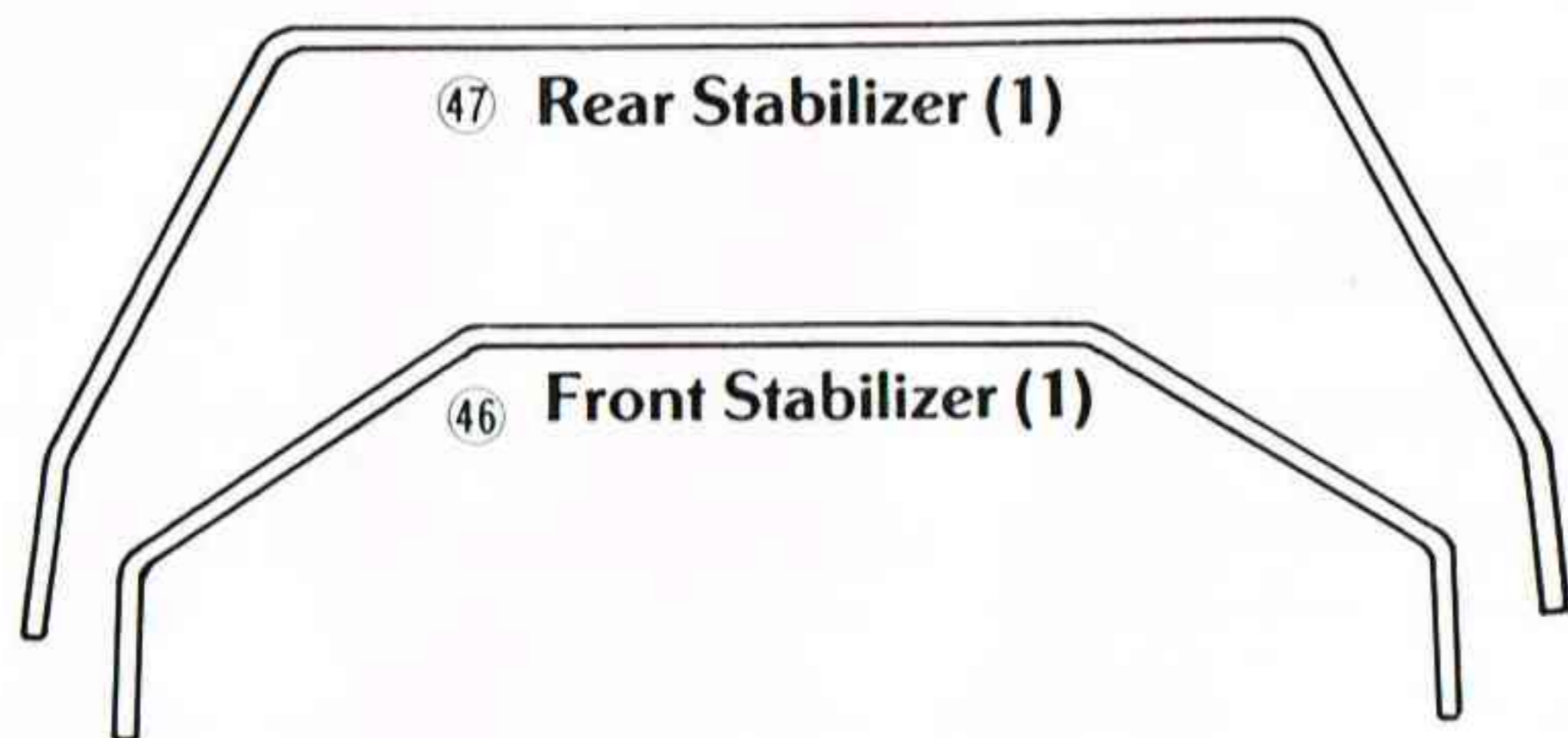
⑧⑧ Battery Holder (2)

UM-29 STABILIZER SET

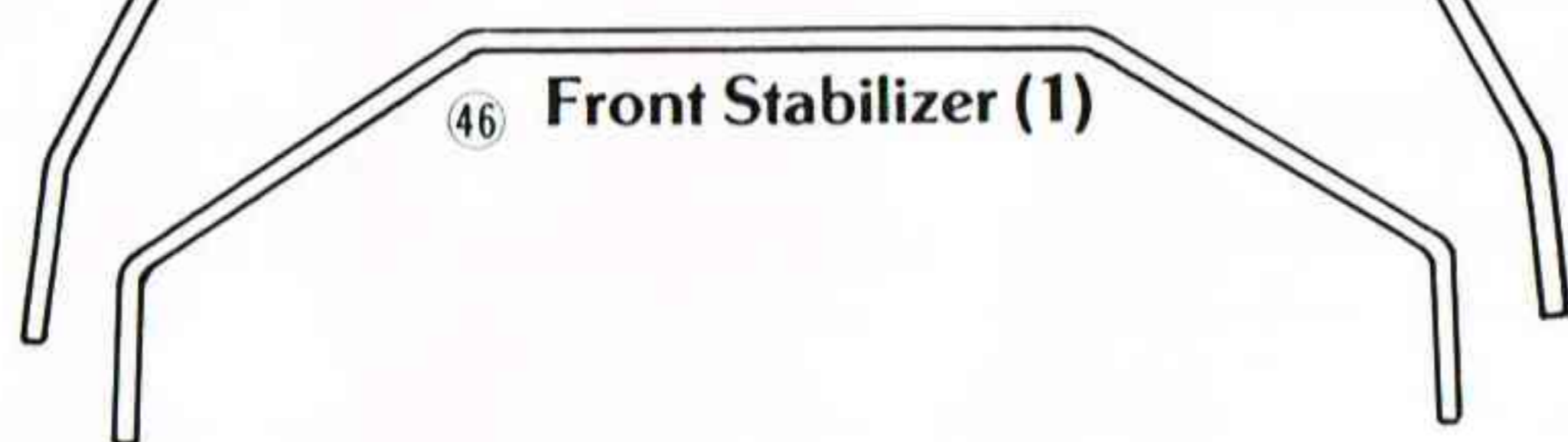
②① Stabilizer Link (L) (2)



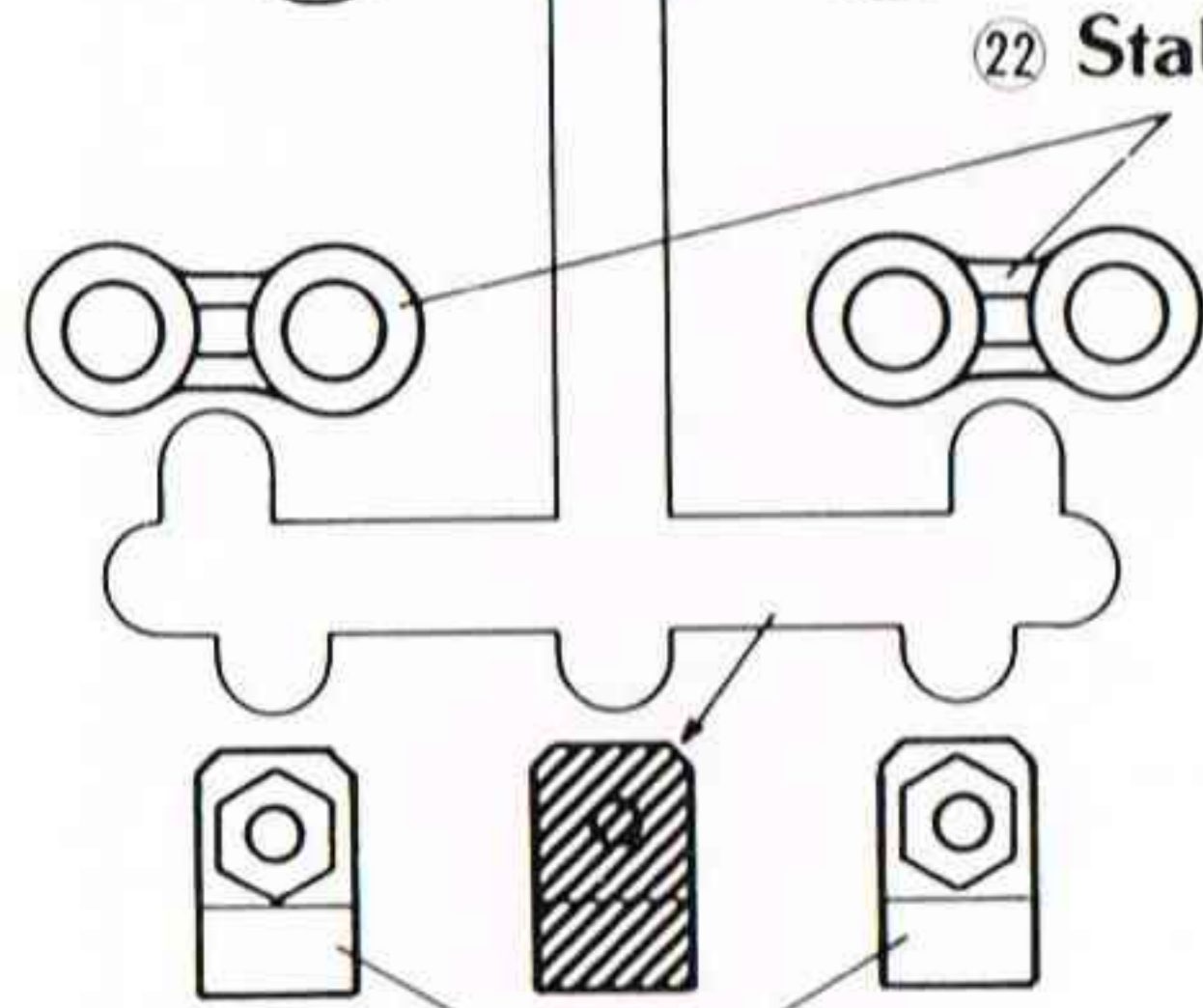
④⑦ Rear Stabilizer (1)



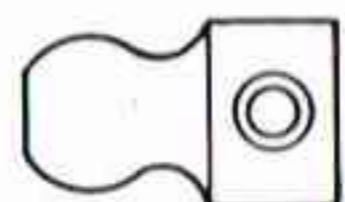
④⑥ Front Stabilizer (1)



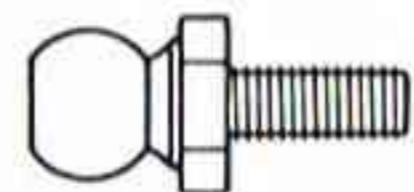
②② Stabilizer Link (S) (2)



⑧② 4.8mm Ball (2)



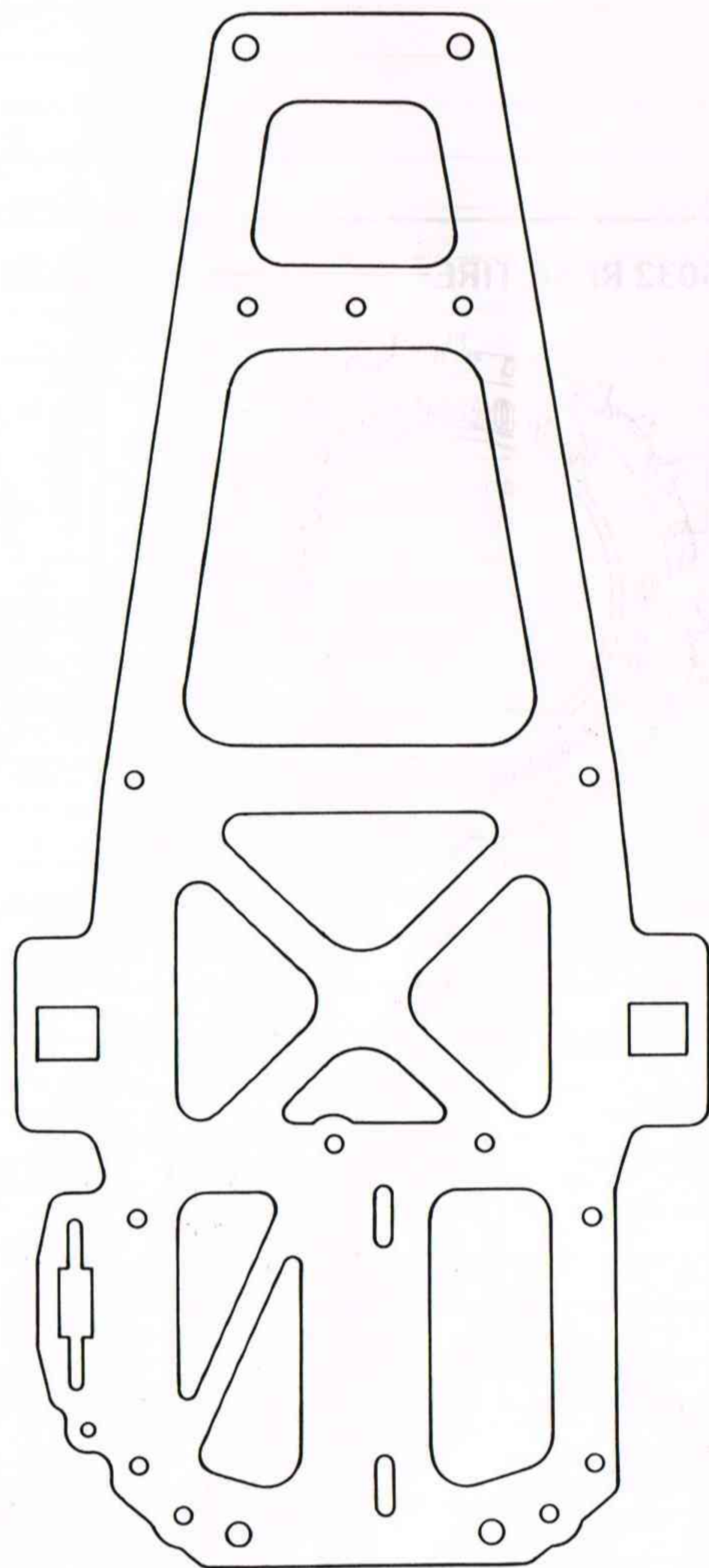
⑤② Stabilizer Pivot (4)



⑤① Pivot Ball (2)

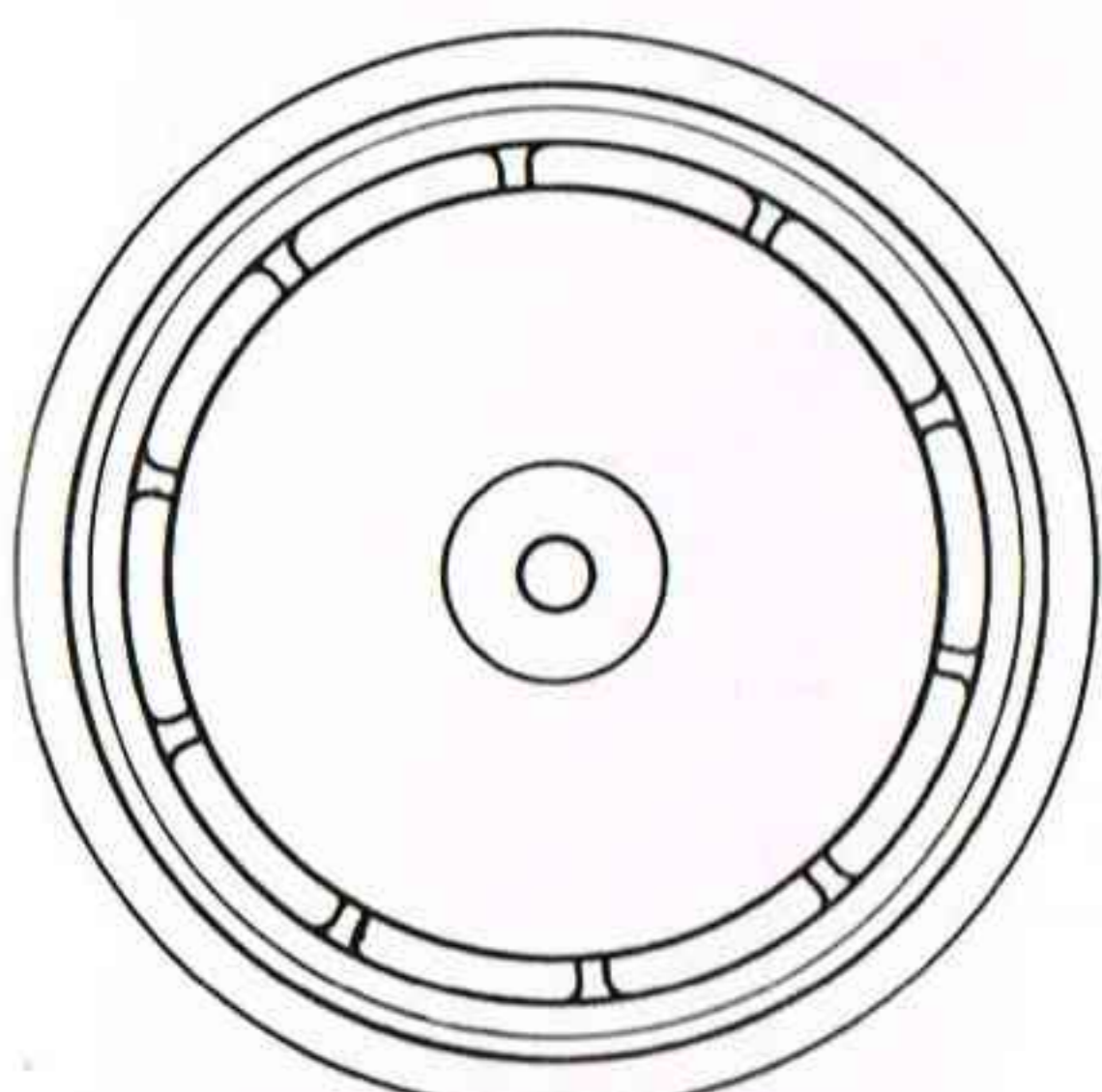
②③ Stabilizer Stopper (2)

UM-30 RADIO PLATE



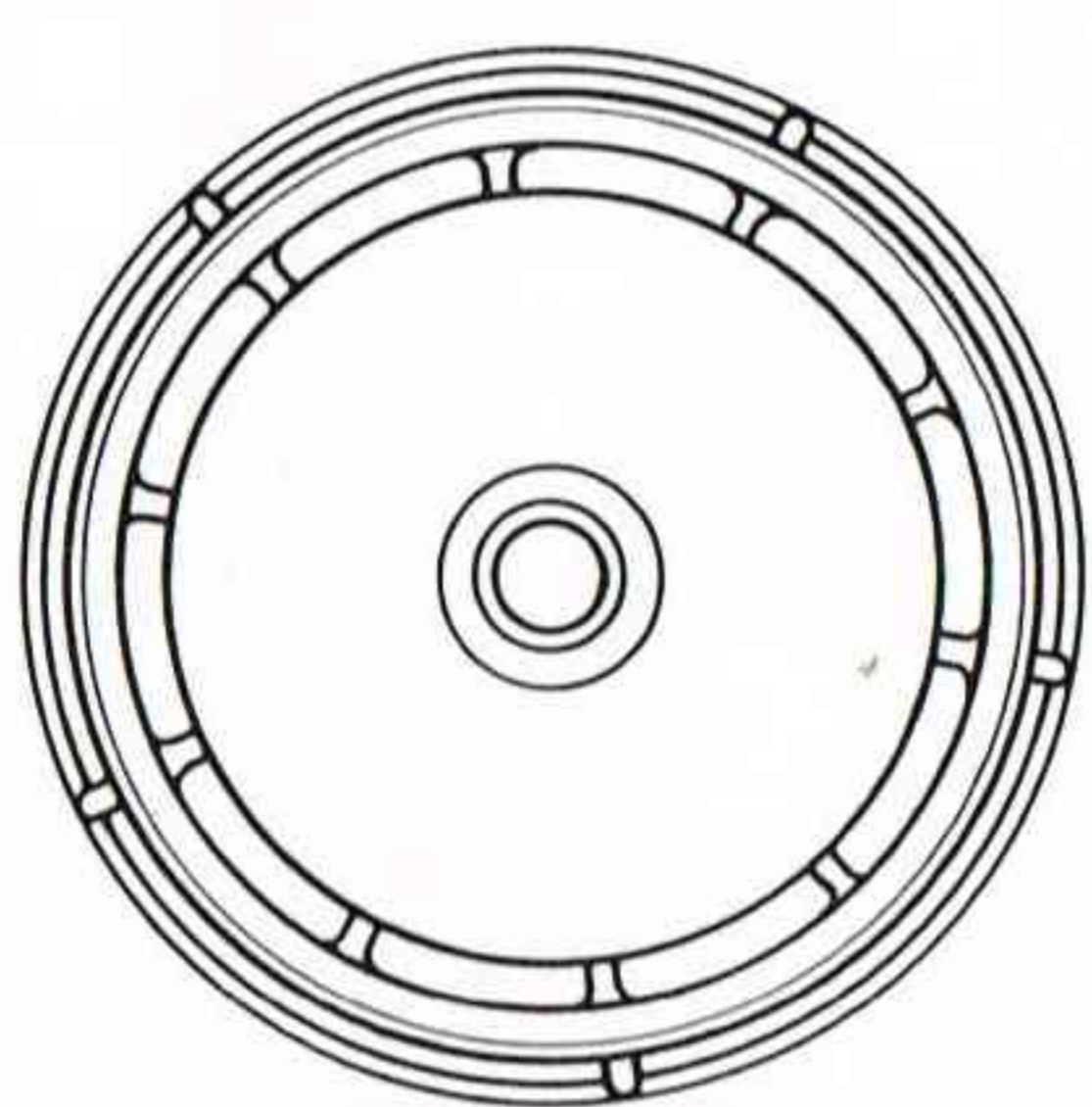
①① Radio Plate (1)

UM-32 REAR WHEEL



②⑥ Rear Wheel (2)

UM-33 FRONT WHEEL



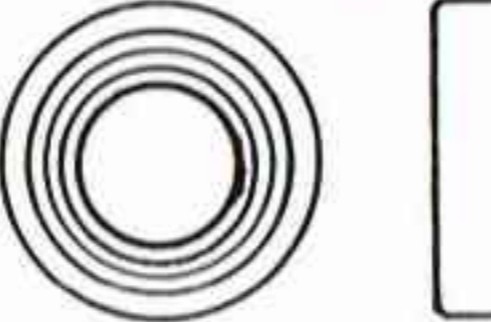
②⑦ Front Wheel (2)

1903 BEARING



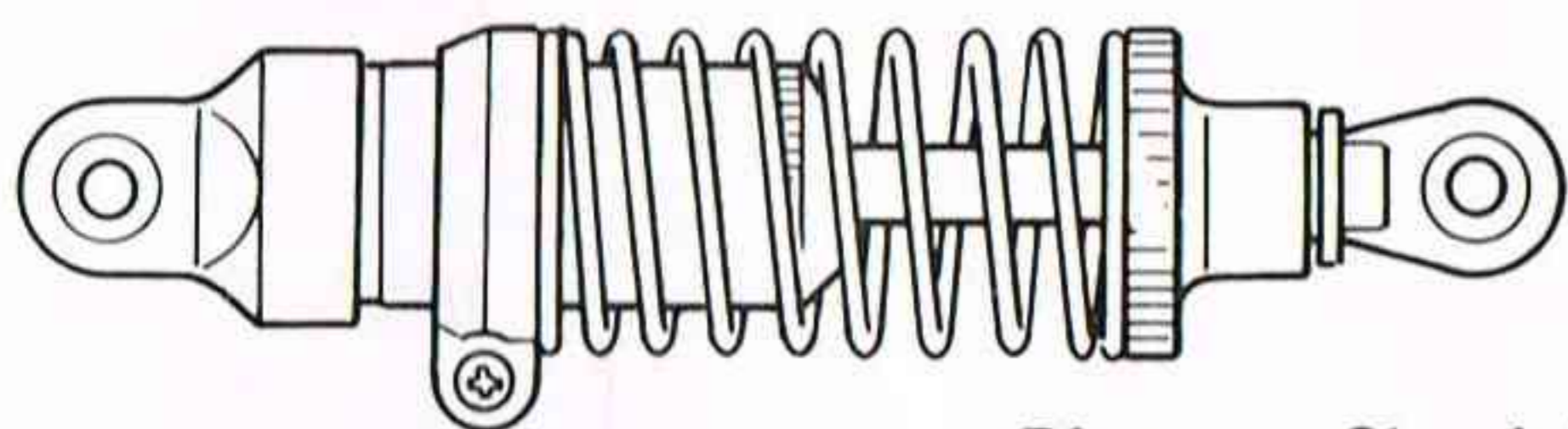
⑥ 4mm x 8mm Bearing (2)

1901 BEARING



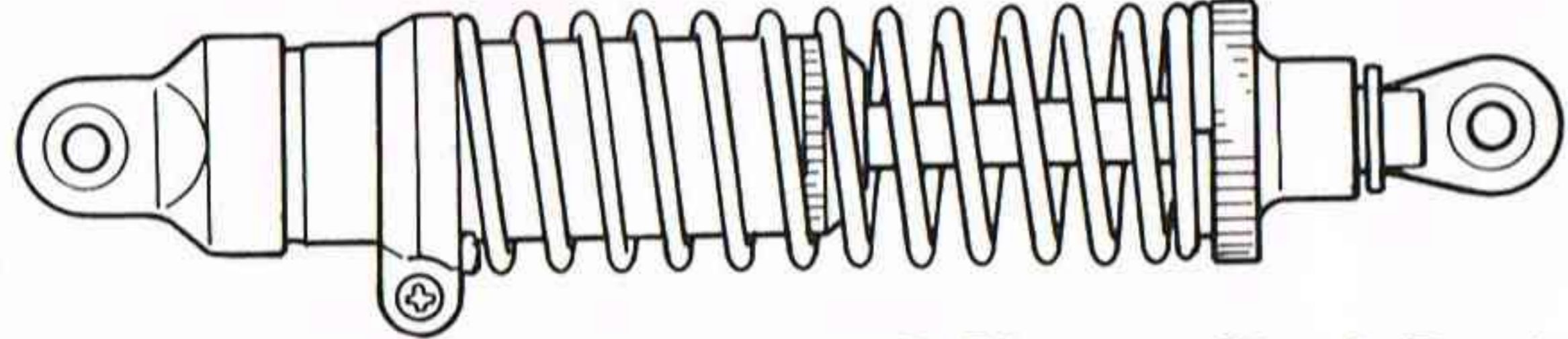
⑦ 5mm x 10mm Bearing (2)

W-5003 PLATINUM SHOCK (Front)



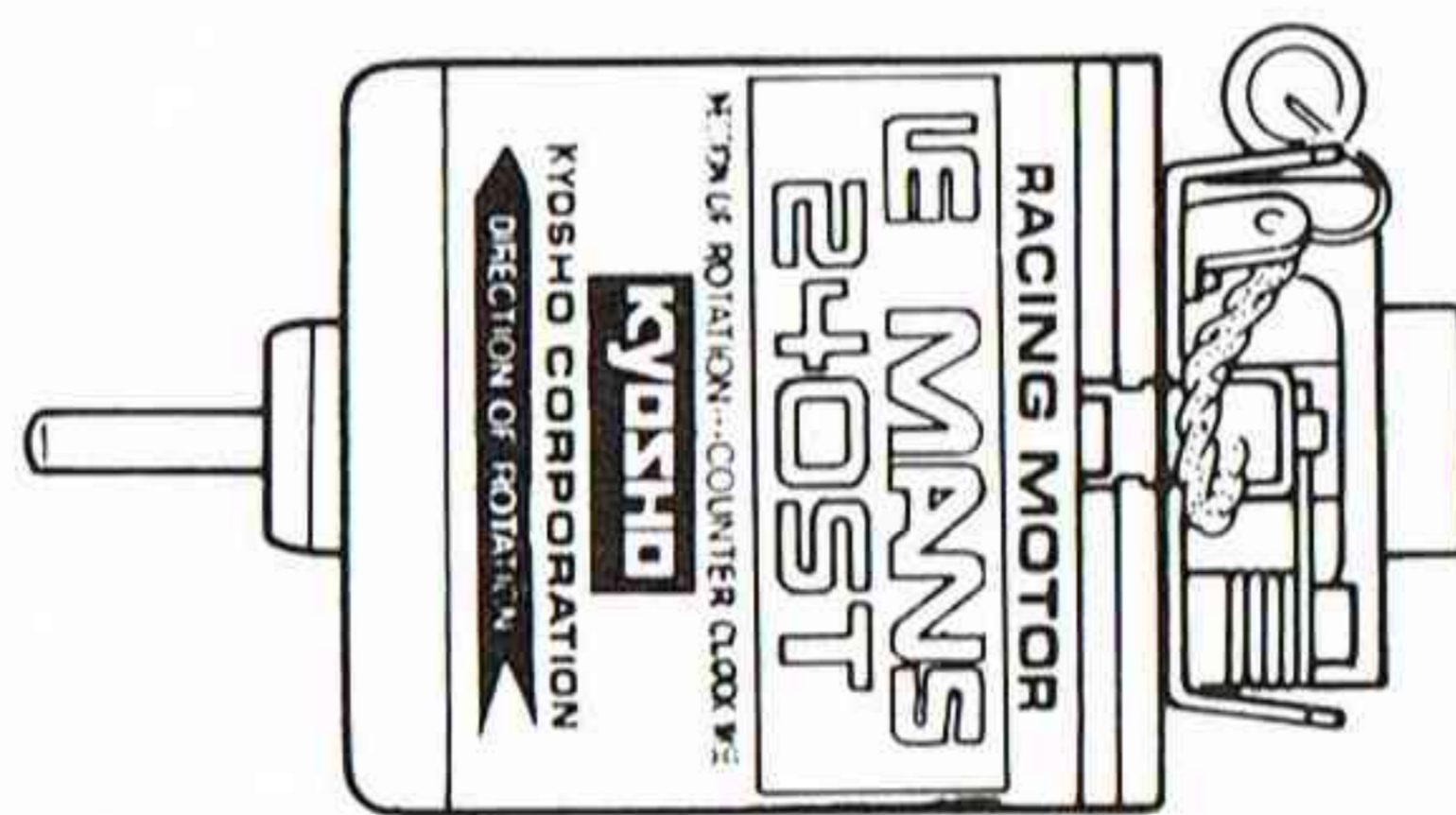
④ Platinum Shock (Front) (2)

W-5004 PLATINUM SHOCK (Rear)



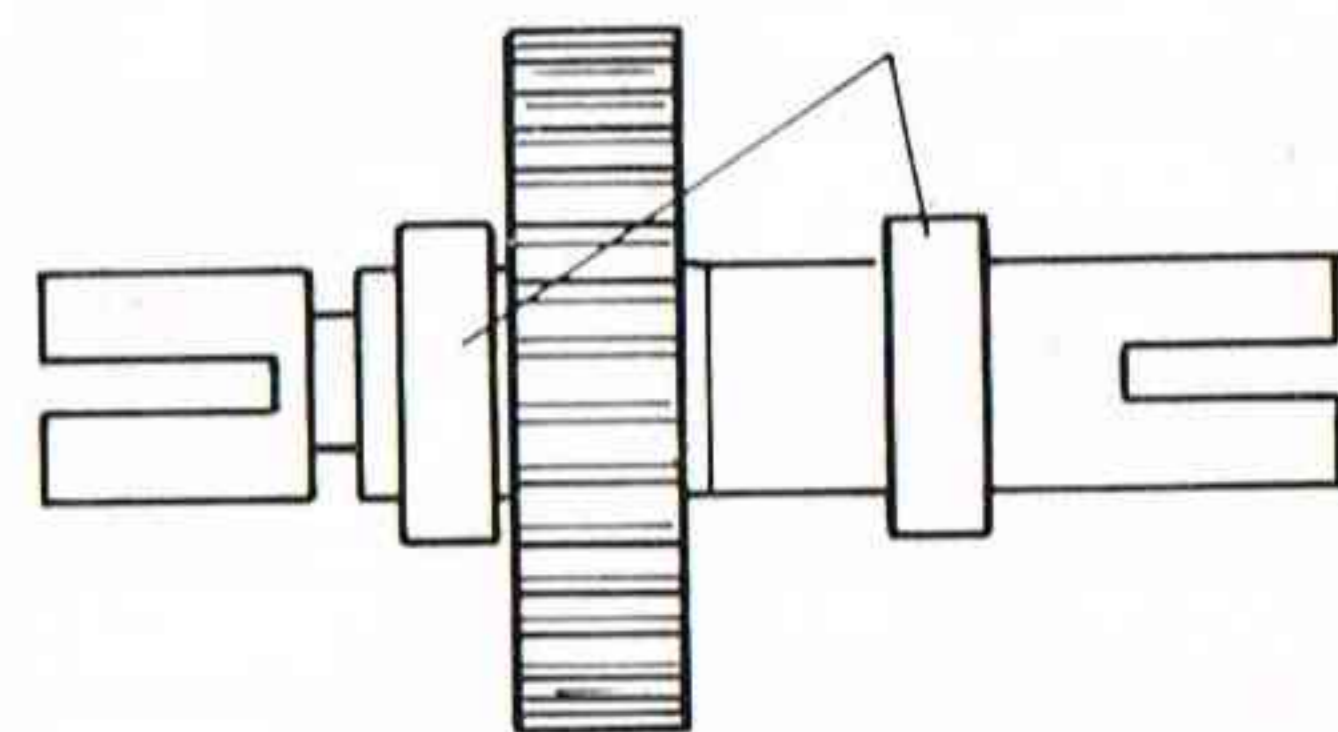
⑤ Platinum Shock (Rear) (2)

1923 LEMANS 240ST



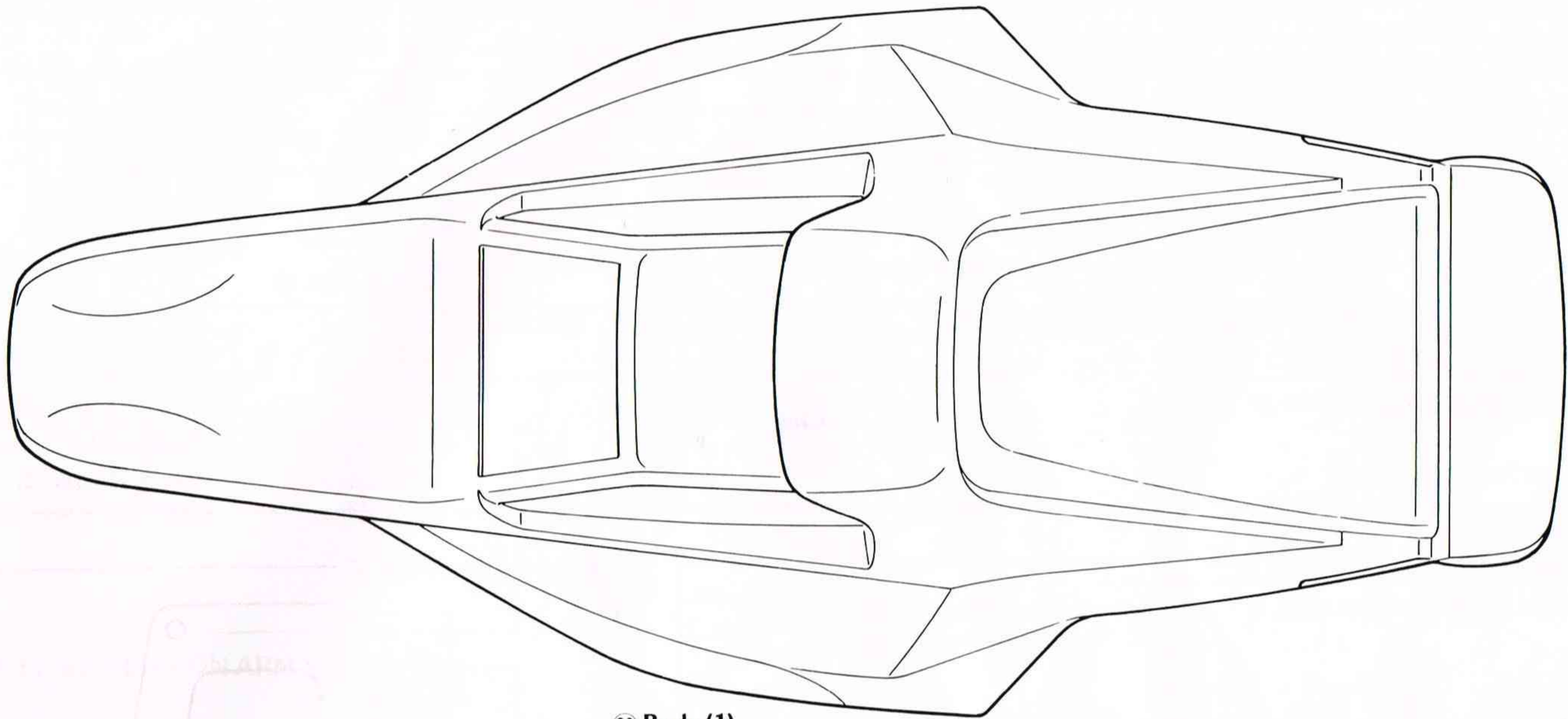
⑩ LeMans 240ST Motor (1)

W-0109 BALL DIFFERENTIAL



② Ball Differential (1)

UM-34 BODY



89 Body (1)

W-5032 REAR TIRE



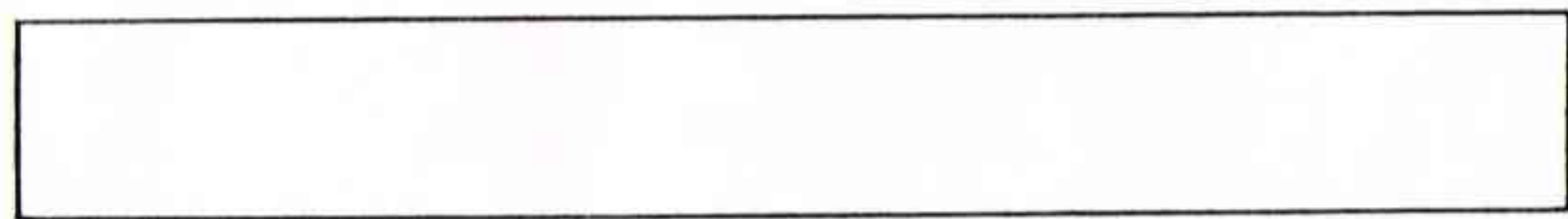
90 Rear Tire (2)

SC-26 FRONT TIRE



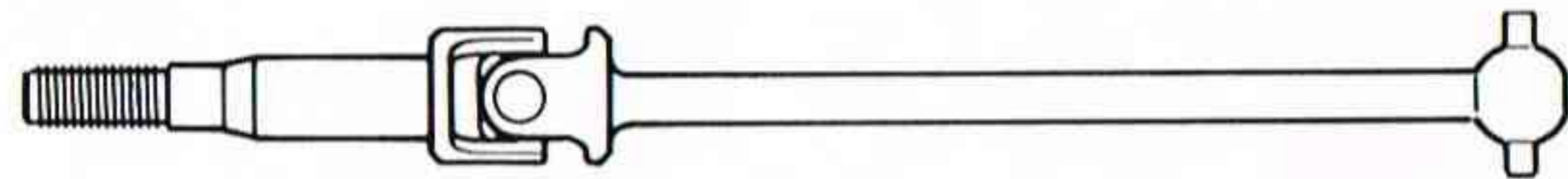
91 Front Tire (2)

SC-46 DOUBLE SIDED TAPE



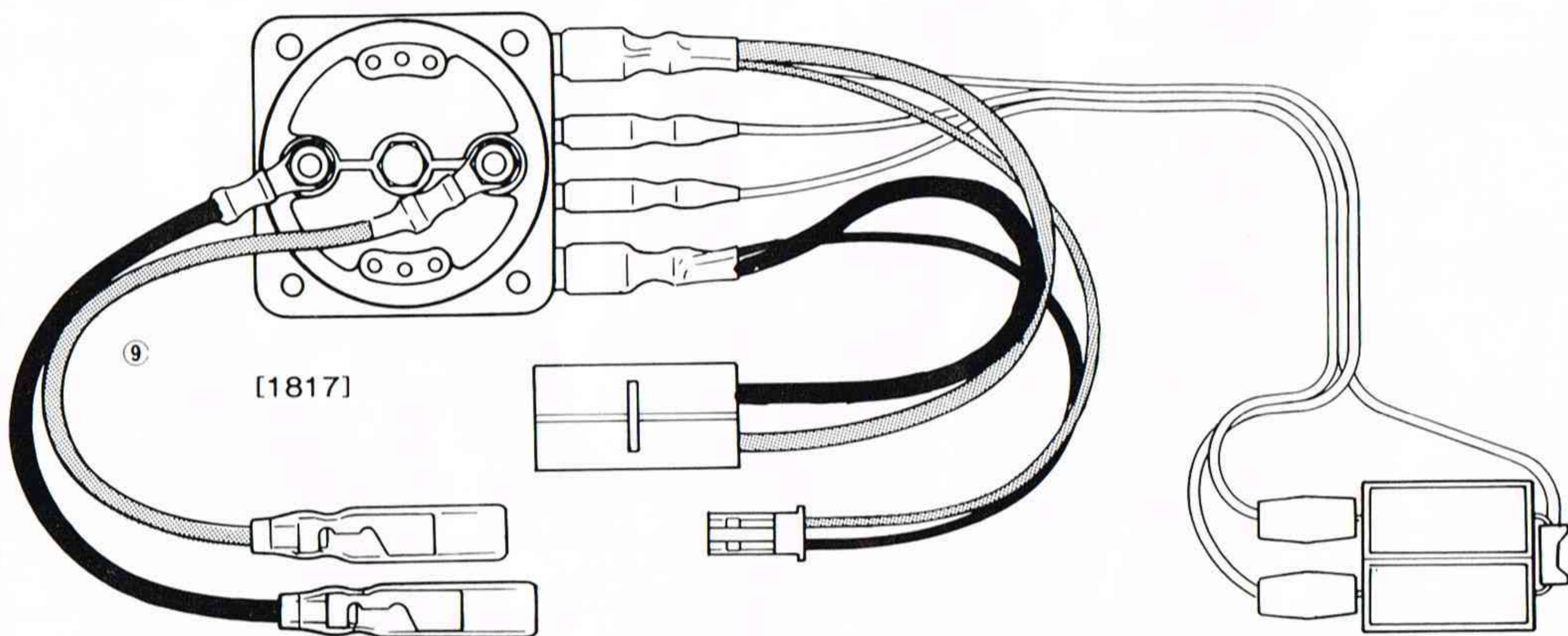
17 Double Sided Tape (1)

W-5061 UNIVERSAL SWING SHAFT



3 Universal Swing Shaft (2)

1817 ROTARY SPEED CONTROL

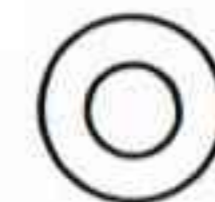


9 Rotary Speed Control (1)

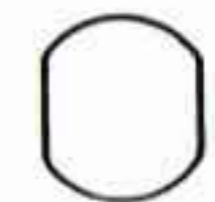
SC-89 TIE ROD



78 Tie Rod (2)



40 5.8mm Ball (4)



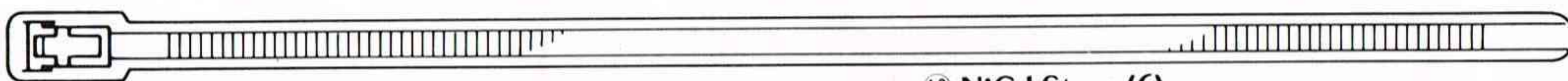
74 Ball End (4)

CB-72 E-RING



95 E-Ring (E-3) (4)

EF-039 NiCd STRAP



19 NiCd Strap (6)

KE-20 E-RING



96 E-Ring (E-4) (4)

1889 BODY PIN



100 Body Pin (5)

UM-35 DECAL

UM-36 SCREW SET

SD-79 ANTENNA PIPE (S)

OPTIONAL PARTS

Hop-up the performance of your Turbo Ultima even more with genuine Kyosho After Market Racing Accessories like Assorted Pinion Gears and Tires to match the track the Turbo Ultima will be racing on. Also using the Special Rod Set allows quick adjustment of critical camber and toe positions.

KEY NO.	PART NAME	CONSISTING OF
UM-17	Wheel Set	Large Diameter Wheel (Front & Rear) × 2
UM-23	Pinion Gear (18T)	
UM-24	Pinion Gear (19T)	
UM-25	Pinion Gear (20T)	
UM-28	Motor Guards	
OT-23	Pinion Gear (12T)	
OT-24	Pinion Gear (15T)	
OT-38	Silicon Grease	2g × 2
OT-50	Pinion Gear (13T)	
OT-51	Pinion Gear (14T)	
OT-52	Pinion Gear (16T)	
OT-53	Pinion Gear (17T)	
OT-66	Low Profile Tire	Pin-Spike Pattern Tire × 2
OT-67	Wheel (for Low Profile Tire)	3 pcs. type × 2
OT-90	Wheel	One-piece type × 2
EF-103	Racing Wire	4mm Silicon Cord
LM-15	Motor Cooling Plate	For LeMans Motor
SC-90	Front Tire	Deep-cut Tread for Loose Surface
RK-15	Low Profile Tire, Blck Type	Rear Tire × 2
1863	Sponsor Sticker	Decal with Sponsor's Marks
1871	Sponge Tire (A)	For Low Profile Wheel and Front
1883	Frontier Hobby Oil	30cc
1953	Silicon Oil (S)	1951 (Soft) Type
1954	Silicon Oil (M)	1951 (Medium) Type
1955	Silicon Oil (H)	1951 (Hard) Type
1990	Regulator	Regulator for Power Supply of Receiver
W-5001	Gold Shocks (S)	Hi-efficient Large Diameter Pressure Shocks
W-5002	Gold Shocks (L)	Hi-efficient Large Diameter Pressure Shocks
W-5005	Special Rod Set	Easy Adjustment
W-5009	Hard Pinion Gear (9T)	Hardened Gears for Heavy Duty Use
W-5010	Hard Pinion Gear (10T)	Hardened Gears for Heavy Duty Use
W-5011	Hard Pinion Gear (11T)	Hardened Gears for Heavy Duty Use
W-5021	Large-Diameter Wheel	Silver Plated Rear (S)
W-5032	Low Profile Tire, Hard	Rear Tire for Hard Surface
W-5033	Narrow Tire (Pin type)	2 pcs. (for Front & Rear)
W-5034	Narrow Tire (for Hard Surface)	2 pcs. (for Front & Rear)
W-5040	Racing Clutch (10T)	
W-5042	Racing Clutch (12T)	
W-5044	Racing Clutch (14T)	
W-5046	Racing Clutch (16T)	
W-5048	Racing Clutch (18T)	
1911	Ball Bearing (8mm × 14mm)	2 pcs.
1951	Damper Oil Set (S,M,H)	(S,M,H) × 1
WBD-1	Ball Differential Shaft Plate Set	A,F,G, × 1, C,L, × 2
WBD-2	Ball Differential Ball Set	D,I × 12, H × 2, J × 10, K53 × 1
WBD-3	Ball Differential Body	E × 1
XX-1011	LeMans 240WS Motor	
1924	LeMans 240SB Motor	
1875	Treaded Front Tire	Front Tire × 2

THE SUPER HOBBY



KYOSHO SPEED CONTROL MAINTENANCE PROCEDURE

Certain high performance parts like the Kyosho Speed Control require routine maintenance to ensure continued reliability in operation. We suggest that you perform the following maintenance procedures after each day of racing for continued peak performance.

Refer to Figure #1 for proper maintenance procedure.

1. Remove center bolt 'A' to disassemble.
2. Inspect wire holding nuts 'B' and 'C' for tightness. Tighten if loose.
3. Check contact 'D' for free vertical movement.
4. If binding exists, remove wire holding nuts 'B' and 'C' to disassemble contact mechanism for cleaning.
4. Clean all dust and dirt from the contact pad areas 'E' and 'F'. A pencil eraser can also be used to burnish the contact pad areas.
5. Reassemble speed controller.
6. After assembly, rotate speed controller through its full movement cycle.
 - A. Make sure the control rod 'G' does not strike one of the wire nuts 'B' and 'C'. If this occurs, the control rod must be repositioned.
 - B. Check that the supply wire terminals 'H' and 'J' turn freely in the rotor when it is moved through its full duration.

The Kyosho Speed Control comes with an extended warranty. If it should require repair or fail to operate, please contact Kyosho's authorized U.S. repair facility for warranty repair or replacement.

Kyosho U.S.A.
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 Champaign, IL 61821
 Phone #217-398-0007

