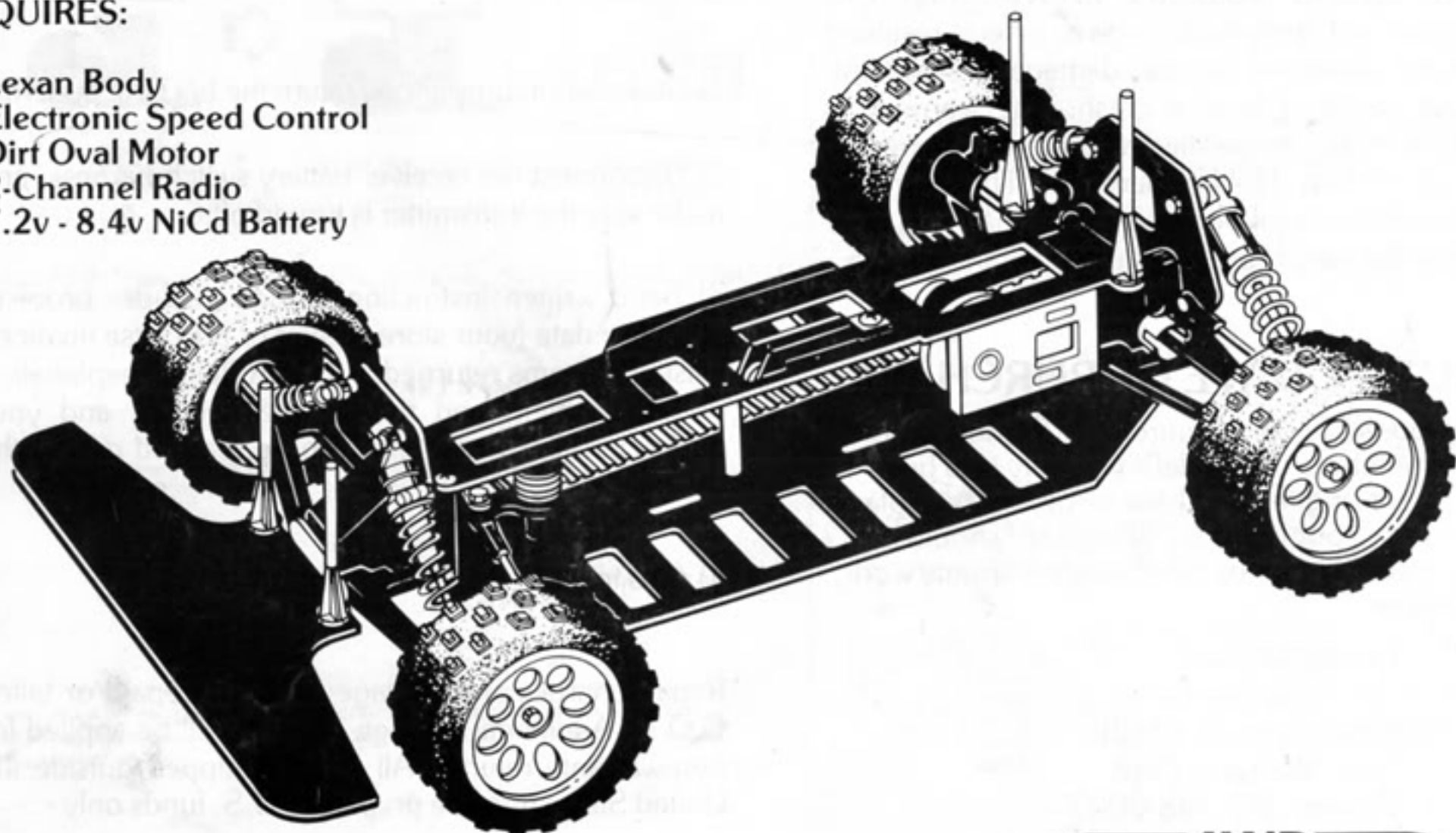


# SLINGSHOT 4WD™

- *INDEPENDENT SUSPENSION ON ALL FOUR WHEELS WITH GOLD OIL-FILLED SHOCK ABSORBERS.*
- *RACE TESTED SUSPENSION GEOMETRY.*
- *ADJUSTABLE TOE AND CAMBER SETTINGS.*
- *SPECIAL FIBERGLASS CHASSIS FOR A LOW CENTER OF GRAVITY AND STRENGTH.*
- *SPECIAL RACE PROVEN BLOCK TIRES AT EACH CORNER.*
- *FULL BALL BEARING SET INCLUDED!*

## REQUIRES:

1. Lexan Body
2. Electronic Speed Control
3. Dirt Oval Motor
4. 2-Channel Radio
5. 7.2v - 8.4v NiCd Battery



**KYOSHO**®

**4WD**  
**DIRT OVAL**  
**RACER**

Entire Contents ©Copyright 1989, **Hobbico**, Inc.

KIT NO. 3156

## WARRANTY INFORMATION

### 90 Day Limited Warranty

It is expressly understood that the standard replacement warranty of the seller, a copy of which is annexed to and made part of this agreement, shall be in lieu of any and all other warranties, including the warranties of merchantability and fitness for use. The sole responsibility of the seller shall be in its replacement obligations contained in this standard warranty.

Kyosho's "Slingshot" is warranted to the original owner to be free of defects in parts or workmanship for a period of 90 days from the date of purchase. During this time Kyosho's authorized U.S. repair facility, Hobby Services, will repair or replace at their option any defective parts without charge.

**Limit of our Liability:** Our liability under this warranty is limited to the repair or replacement of defect or defective parts by Hobby Services and does not include shipping expense.

**Exclusion and/or Voidance of Warranty:** This warranty does not apply to damage or defects resulting from misuse, abnormal service, damage in shipment, or damage resulting from a crash. The warranty is voided if the model is modified, altered, or repaired by anyone other than Hobby Services. This warranty gives you specific legal rights, and you may also have other rights that vary from state to state within the U.S.

## PROOF OF DATE OF PURCHASE

It is the responsibility of the purchaser to show proof of the date of purchase if a model's warranty is to be honored. Your original purchase invoice or receipt will suffice for this. Your Kyosho "Slingshot" should be returned directly to Hobby Services for warranty work. The address is:

Hobby Services  
1610 Interstate Drive  
Champaign, IL 61821  
Attn: Warranty Dept.  
Phone: 217-398-0007

## SHIPPING INFORMATION

Please follow steps 1 through 4 in "Repair Service" when returning a model to Hobby Services. (See Below).

We are sorry, but we cannot be responsible for crash damage and/or loss of kits, engines, accessories, etc.

## REPAIR SERVICE

Should your model be past the 90 day warranty period, or should your kit be voided or excluded from warranty coverage, repairs are available for a nominal cost through Kyosho's authorized U.S. repair facility, Hobby Services. Since we want you to be happy with your purchase for a long time, Hobby Services employs a full time in-house service staff. They have the professional knowledge and the sophisticated equipment and parts available to service your model for years to come. When returning your model, whether for warranty or repair service, please be sure to follow the instructions listed below. This will help the technician troubleshoot the system, repair it, and return it to you as quickly as possible.

- 1) Under all circumstances, return the ENTIRE system.
- 2) Disconnect the receiver battery switch harness, and make sure the transmitter is turned off.
- 3) Send written instructions which include: proof of purchase date (your store receipt or purchase invoice), a list of all items returned, a THOROUGH explanation of the problem and the service needed, and your phone number where you can be reached during the day.
- 4) Also include your full return address.

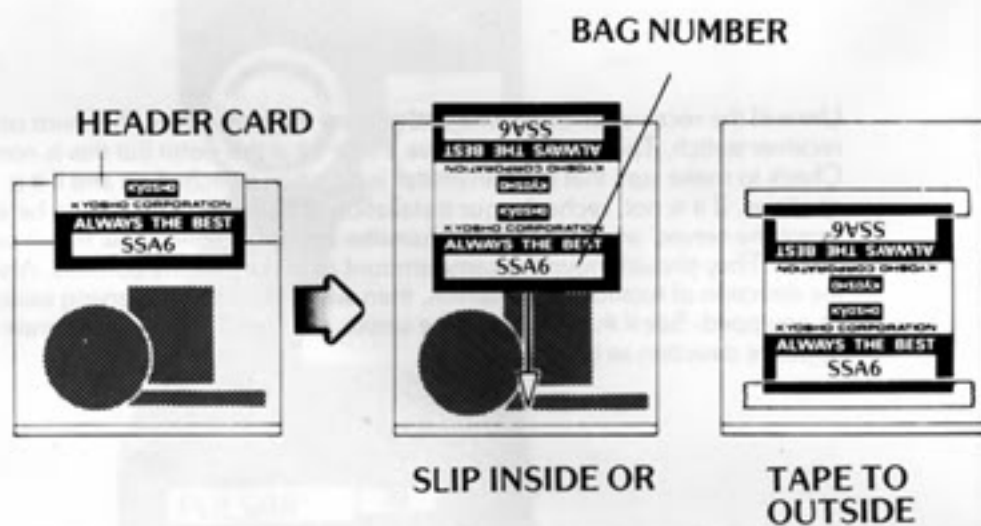
Repair charges and postage may be prepaid or billed C.O.D. Additional postage charges will be applied for non-warranty returns. All repairs shipped outside the United States must be prepaid in U.S. funds only.

## IMPORTANT! BEFORE YOU BEGIN

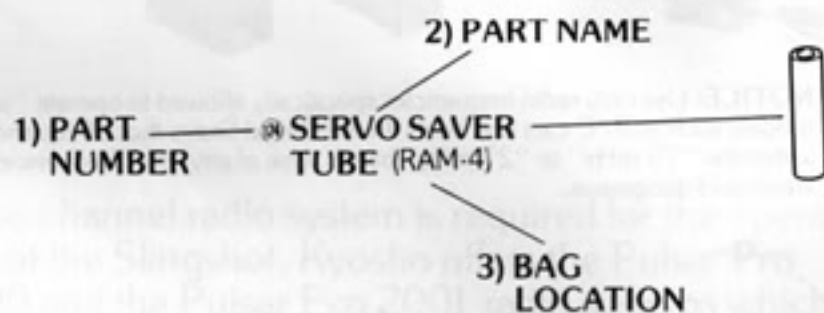
This is a sophisticated model with a large number of moving parts. Before you begin assembly, take a look through the box and these instructions carefully to decide whether or not you are ready for this challenge! If you do not think that this type of model is for you, it may be returned to the dealer 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! IT IS VERY IMPORTANT TO read through this entire manual thoroughly to familiarize yourself with the parts and methods of construction used BEFORE actually starting to build.

## HOW TO USE THIS MANUAL

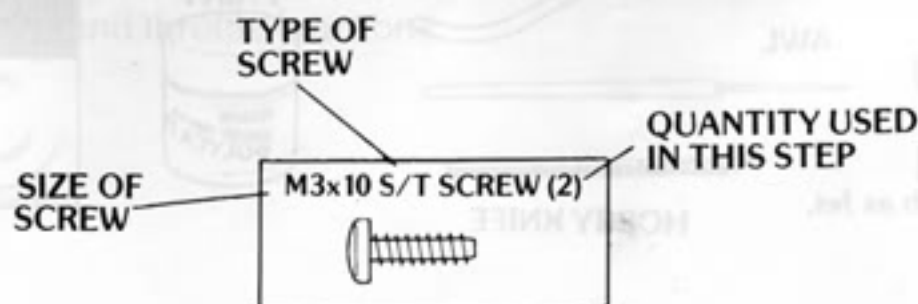
This Kyosho instruction manual uses a unique cross reference system to help you locate all of the bagged parts. DO NOT open each bag and dump out the parts. Carefully remove the header card from the bag and discard the staple. Slip the header card into the bag or tape it to the outside of the bag so that the bag number shows. These bag numbers will be used throughout the assembly process and will prove invaluable when locating parts.



In each step of assembly each part will be labeled with 1) The part number, 2) Part name, and 3) Bag location.



In the left margin of each page you will find a directory of small parts that will be used in each step. For ease of identification, these parts are shown actual size enabling you to place a screw directly on the picture to ensure you have selected the appropriate size.

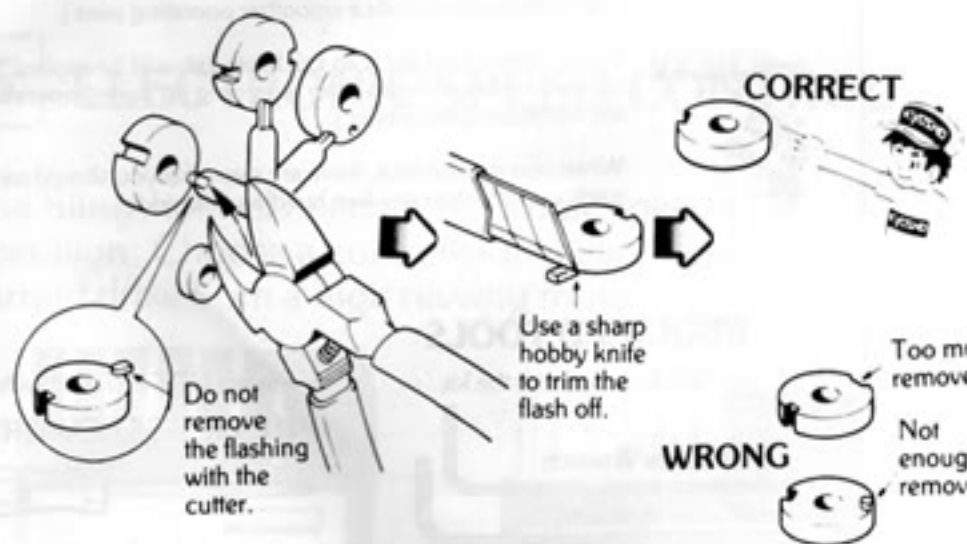


On page 23 you will find a complete list of parts used in this kit including the part number and total quantity supplied in the kit. On pages 6 & 7 you will find an inventory of how each part is bagged and in which step it is used. When ordering replacement or optional parts, see page 24 for a complete listing of parts and stock numbers.

## HELPFUL TIPS & PRECAUTIONS

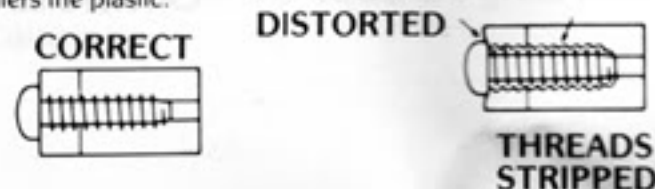
Some precautions need to be observed when building your kit to avoid problems.

- 1.) Use a muffin tin or egg carton to separate screws, nuts, washers, etc. This will make it easier to locate the correct part.
- 2.) Place a mat or towel on the work surface where you will be building the kit. This will prevent parts from rolling off and will protect the work surface at the same time.
- 3.) Try to avoid working over a shag carpet. In the event that a small part or screw should fall onto the carpet, it will be difficult to find.
- 4.) Avoid getting products like engine cleaner or screw lock on the plastic parts. They can have a serious effect on your model.
- 5.) Avoid running the "Slingshot" in very cold temperatures. Both plastic and metal parts become brittle at low temperatures. In addition, grease and oil become very thick causing premature wear and deficient performance.
- 6.) Remove all flashing from parts before assembly as shown in the example below.



- 7.) Trial fit all parts to ensure proper fit before attaching them permanently.

8.) Do not use excessive force when tightening self tapping 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.



## RADIO OPERATIONAL CHECK

Thoroughly read and follow the instructions supplied with your radio system. The following instructions are a general procedure for testing the operation of your radio system.

An operational check of your complete radio system prior to installation is a must. This check will locate possible defective components BEFORE they are installed in your model.



Gently plug the switch harness and servo connectors into the proper receptacles on the receiver. The connectors are polarized and will fit only one way. If they do not plug in easily, turn them around and try again. (DO NOT FORCE.) Install the batteries into the battery holders for both the transmitter and receiver.

Unravel the receiver antenna wire and turn on the transmitter, then turn on the receiver switch. The servos may move a little bit at this point but this is normal. Check to make sure that the transmitter is on when switched on and if it is, continue. If it is not, recheck your installation of batteries. You should be able to move the servos' arms using the transmitter controls. Notice how the servos move. They should move the same amount as you move the controls. Also, notice the direction of rotation of the servos, then switch the servo reversing switches, if so equipped. See if the rotation of the servos change. They would operate in the opposite direction as before.

Decide whether your radio is in proper working order. If you decide that it is defective, check the warranty procedures described in the radio instruction manual. When turning off the system, always turn the receiver off first, then the transmitter. This will prevent the receiver from responding to stray signals which can cause the servos to react erratically and move to the extreme of their rotation which can cause damage.

**NOTICE:** 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.

9.) Ensure that all parts are well lubricated where the instructions indicate the use of grease.

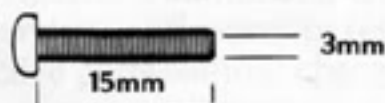
10.) Avoid using power screwdrivers when assembling your kit. They tend to overtighten screws.

11.) Take your time and read the directions thoroughly. It's not how fast you can assemble the kit but how fast it goes once it is assembled.

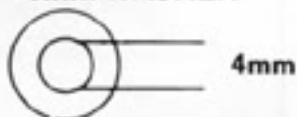
## METRIC NUTS AND BOLTS

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 M3x15 screw is 3mm diameter and 15mm long, some round parts may be labeled as a "4mm Washer" (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.

### M3 x 15 SCREW

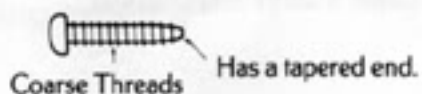


### 4mm WASHER

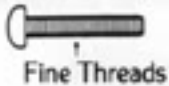


A few different types of screws are used in the construction of your model. Here are some examples and how they will be indicated in the instructions. For example, Self Tapping will simply be S/T screw.

### SELF TAPPING (S/T)



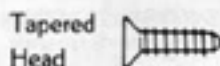
### SCREW



### Set Screw



### FLAT HEAD SCREW (F/H)



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



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



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



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

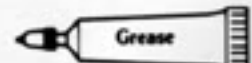
## REQUIRED TOOLS

These ARE included with the kit.

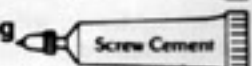
1.5mm Hex Wrench

2mm Hex Wrench

Silicone Grease

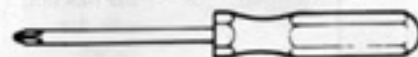


Screw Locking Compound

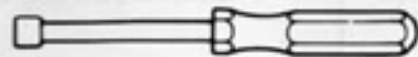


These are NOT included with the kit.

### PHILLIPS SCREWDRIVER



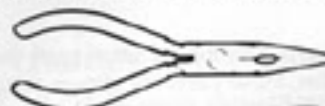
3mm & 4mm NUT DRIVER  
(7/32) (9/32)



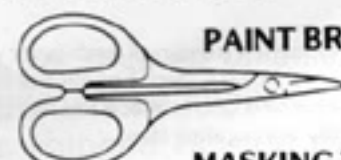
CYANOACRYLATE GLUE (such as Jet, CA, Hot Stuff or Crazy Glue.)



### NEEDLE NOSE PLIERS



### LEXAN SCISSORS



### WIRE CUTTERS



### AWL



### HOBBY KNIFE



### PAINT BRUSH

### MASKING TAPE



### PAINT



## 1 LEXAN BODY

The Slingshot does not include a body, this allows you to choose a style that you like best. For authenticity choose a scale body or for more aerodynamic performance, choose a "wedge" style body. Remember, it has been proven that aerodynamics, even at such a small scale, still plays a large part in the cars handling performance.

## 2 RADIO SYSTEM



A two channel radio system is required for the operation of the Slingshot. Kyosho offers the Pulsar Pro 2000 and the Pulsar Exp 2001 radio systems which work great for the Slingshot. The Pro 2000 features a BEC receiver, servo reversing, charge jack for optional NiCds and is precision balanced for comfort. The Exp 2001 has all the same features as the Pro 2000 plus steering dual rate, servo end point adjustments and also incorporates adjustable exponential rates for both steering and throttle functions.

## 3 MOTOR

The Slingshot is designed for higher speeds rather than torque. Therefore, the proper motor to use should be a high rpm (low wind) motor.



The Mega Motor series offers a different motor for excellent performance in any application. The Dirt Oval Mega Motor is a 14-turn double-wind screamer that puts out 33,000 rpm, perfect for the Slingshot.

Mega Motor™ is a registered trademark of Darda, Inc. USA, manufacturers of Darda racing cars and track sets.

## 4 BATTERIES (NICD)

The Slingshot can use any type of battery configuration for operation. The batteries shown below work well.



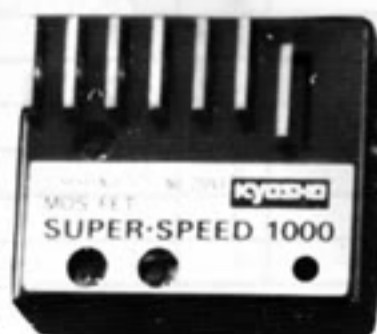
Kyosho 6-Cell  
1700 Speed SCE



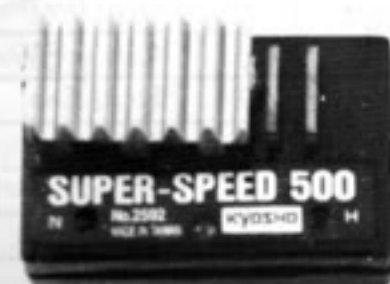
Kyosho 6-Cell  
1200 Sprint SCR

## 5 ELECTRONIC SPEED CONTROL

The Slingshot will need an electronic speed control for operation. Choose a controller that can handle the current draw from a high revving motor.



Kyosho  
SC-1000



Kyosho  
SC-500

The Kyosho SC-500 or SC-1000 are great for the dirt oval application.

**LIST OF BAGGED PARTS (1)**

BAG. #	KEY #	PARTS NAME	QTY	STEP USED
SSA1	1	Chassis	1	4
	2	Bumper	1	20
	3	Upper Deck	1	7
	4	Shock Tower	2	2
SSA2	5	Top Bulkhead	2	2
	6	Lower Bulkhead	2	2
	7	Rear Suspension Spacer	2	2
SSA3	8	Tensioner	1	7
	9	Belt Guide (A)	1	7
	10	Belt Guide (B)	1	7
	11	Belt Guide (C)	1	7
	12	Belt Guide (D)	1	7
	13	Belt Pulley (A)	1	3
	14	Belt Pulley (B)	1	3
SSA4	15	Pulley Spacer	1	3
	16	Body Mount	4	7, 20
SSA5	17	Body Spacer	4	20
	19	Shaft Mount (R)	1	4
SSA6	20	Shaft Mount (L)	1	4
	21	Mounting Plate	1	4
	22	Right Knuckle Arm	1	8
SSA7	23	Left Knuckle Arm	1	8
	24	Front Suspension Arm	2	9
	25	Rear Suspension Arm	2	10
	26	Front Hub (R)	1	8
	27	Front Hub (L)	1	8
	28	Rear Hub (R)	1	8
	29	Rear Hub (L)	1	10
	30	Ball End (LG)	16	11, 14
	31	Servo Saver (A)	1	5
	32	Servo Saver (B)	1	5
	33	Servo Saver (C)	1	5
	34	Servo Saver (D)	1	5
	35	Servo Saver Spacers	2	6
	36	Servo Mount	4	21
	37	Servo Mount Spacer	2	21
	38	Antenna Mount	1	4
	39	Shock Bushing	4	17
	40	M3 Plastic Nut	6	7, 17
	41	Ball End (SM)	3	5
	SSA8	42	Front Rim (A)	2
43		Inner Rim (Narrow)	2	19
44		Front Rim (B)	2	19
45		Rear Rim (A)	2	19
46		Inner Rim (Wide)	2	19
47		Rear Rim (B)	2	19
SSA9	48	Front Tire (Narrow)	2	19
	49	Rear Tire (Wide)	2	19
SSA10	50	Shock Cap	4	15
	51	Shock Spring	4	16
	52	Spring Holder	4	16
	53	Shock Shaft	4	14

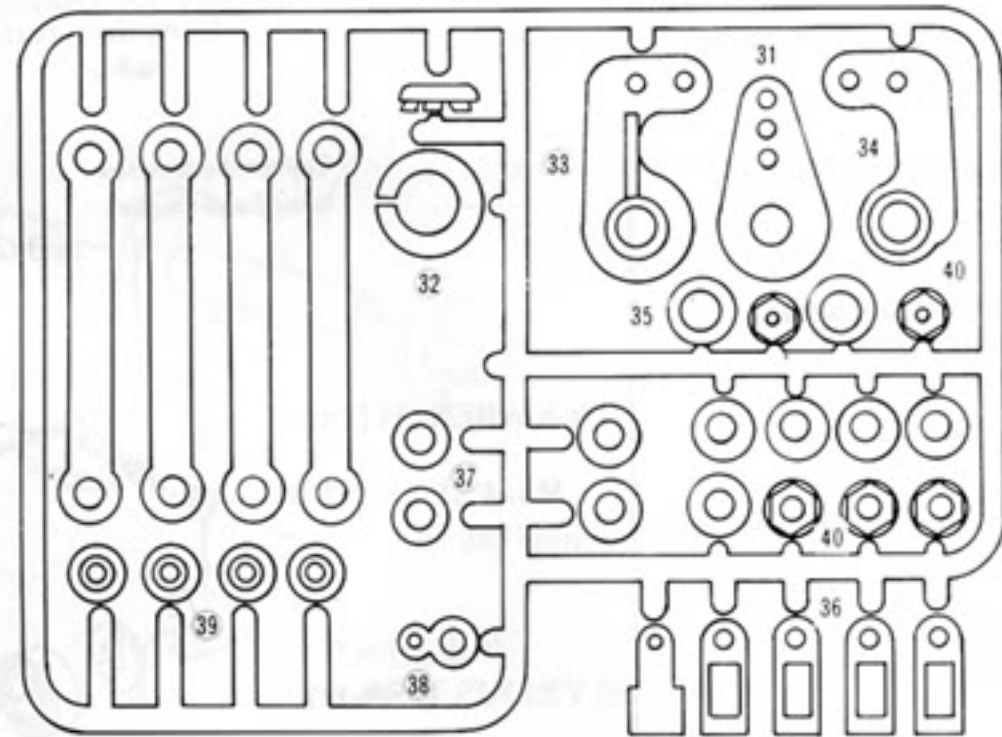
BAG. #	KEY #	PARTS NAME	QTY	STEP
SSA9	54	Spring Retainer	4	14
	55	Shock Case	4	14
	56	Shock Ball End	4	14
	57	Spacer (Thick)	4	14
	58	Spacer (Thin)	4	14
	59	Retainer Clip	4	14
	60	Diaphragm	4	15
	61	Shock Pistons	4	14
	62	O-Ring	8	14
	SSA10	63	4x8mm Bearing	2
64		5x10mm Bearing	9	7, 10
65		8x14mm Bearing	4	1
66		Front Belt	1	2
67		Rear Belt	1	2
68		Counter Gear	1	3
69		One-Way Diff.	1	1
70		Axle Shaft	1	1
71		3x20mm Pin	1	1
72		Belt Pulley (A)	1	1
73		Belt Pulley (B)	1	1
74		Counter Gear Shaft	1	3
75		Deck Post	2	4
76		Counter Gear Guide	1	3
SSA11	77	Tensioner Spring	1	7
	78	Steering Rod	1	21
	79	Sus. Pivot Plate	2	2
	80	Motor Plate	1	18
	81	M2.6 Pivot Ball	4	5, 8
	82	2x11mm Pin	1	3
	83	Front Sus. Shaft (A)	2	9
	84	Rear Sus. Shaft (A)	2	10
	85	Front Sus. Shaft (B)	2	9
	86	Rear Sus. Shaft (B)	2	10
	87	Upper Rod	4	11
	88	Tie Rod	2	4
	89	Servo Saver Post	2	4
	90	Swing Shaft	4	12, 13
	91	M5.8 Ball	8	11
	92	Ball Nut	3	5
	93	M3 Pivot Ball	4	9, 10
	94	King Pin	4	8
	95	Drive Washer	4	20
	96	Front Wheel Shaft	2	8
97	Rear Wheel Shaft	2	10	
98	Joint	4	1	
99	Saver Spring	1	5	
100	Pinion Gear (20T)	1	18	
SSA12	101	Silicone Grease	1	
	102	Double Sided Tape	1	22
	103	Screw Locking Compound	1	
	104	Shock Oil	1	15
	105	4-Way Wrench	1	
	106	Straps (SM)	2	22

## LIST OF BAGGED PARTS (2)

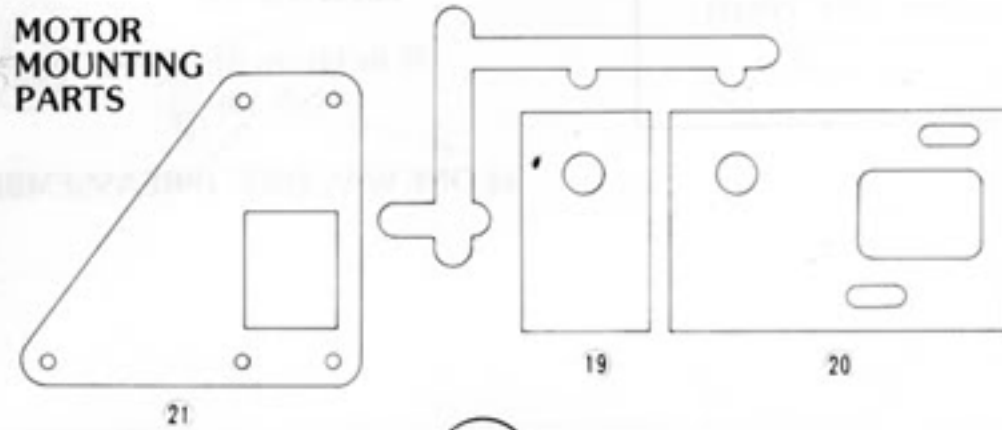
## PLASTIC PARTS TREE

### SERVO SAVER AND MISC. PARTS

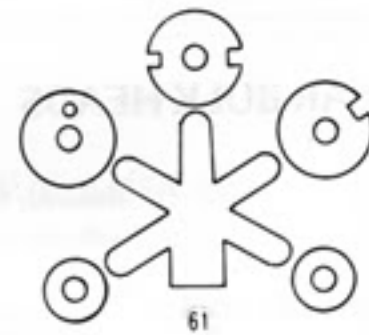
BAG. #	KEY #	PARTS NAME	QTY	STEP
SSA-14	107	Decals	1	
	108	Binding Tape	1	23
	109	Antenna Tube	1	22
	18	Instruction Manual	1	
SSA-13	110	E-Clip (E-2.5)	20	9, 10
	111	E-Clip (E-3)	4	3, 4
	112	E-Clip (E-4)	2	6
	113	2x10mm Threaded Rod	1	5
	114	Body Pins	4	26
	115	1.5mm Hex Wrench	1	18
	116	2.5mm Hex Wrench	1	1
		M2.6x6 Screw	1	
		M3x8 Screw	6	
		M3x12 Screw	11	
		M4x12 Screw	4	
		M3x18 Screw	4	
		M3x6 F/H S/T Screw	5	
		M3x10 F/H S/T Screw	2	
		M3x12 F/H S/T Screw	2	
		M3x15 F/H S/T Screw	6	
		M3x10 S/T Screw	16	
		M3x12 S/T Screw	2	
		M2x8 S/T Screw	16	
		M2x10 S/T Screw	4	
		M2.6x10 S/T Screw	4	
		M3x15 S/T Screw	4	
		M3x18 S/T Screw	4	
		M2.6x6 S/T Screw	1	
		M3x10 S/T Screw	8	
		2.6 Nut	2	
		M3 Nut	15	
		M4 Nylon Nut	6	
		2.6 Washer	4	
		M3 Washer	6	
		M4 Washer	6	
		M5 Washer	4	
		M3x3 Set Screw	5	
		M4x4 Set Screw	4	
	M3x14 Screw	4		
	M4x10 F/H Screw	2		



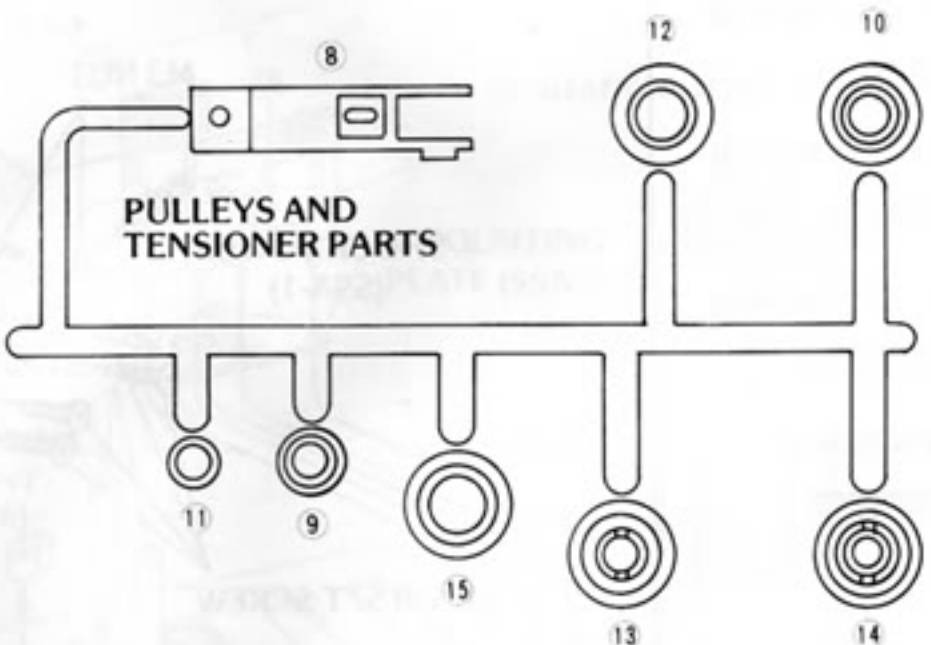
### MOTOR MOUNTING PARTS



### SHOCK PISTONS



### PULLEYS AND TENSIONER PARTS

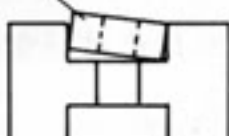


## BEARING INSTALLATION

For troublefree operation, make sure that the bearings are pressed in properly with no binding.

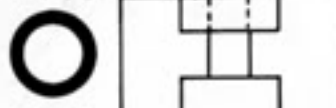
This is not a good fit.

**BAD**  
**X**

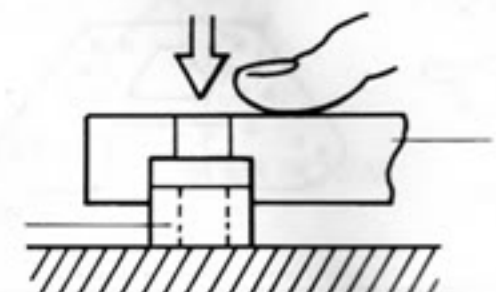


The bearing should fit flush.

**GOOD**

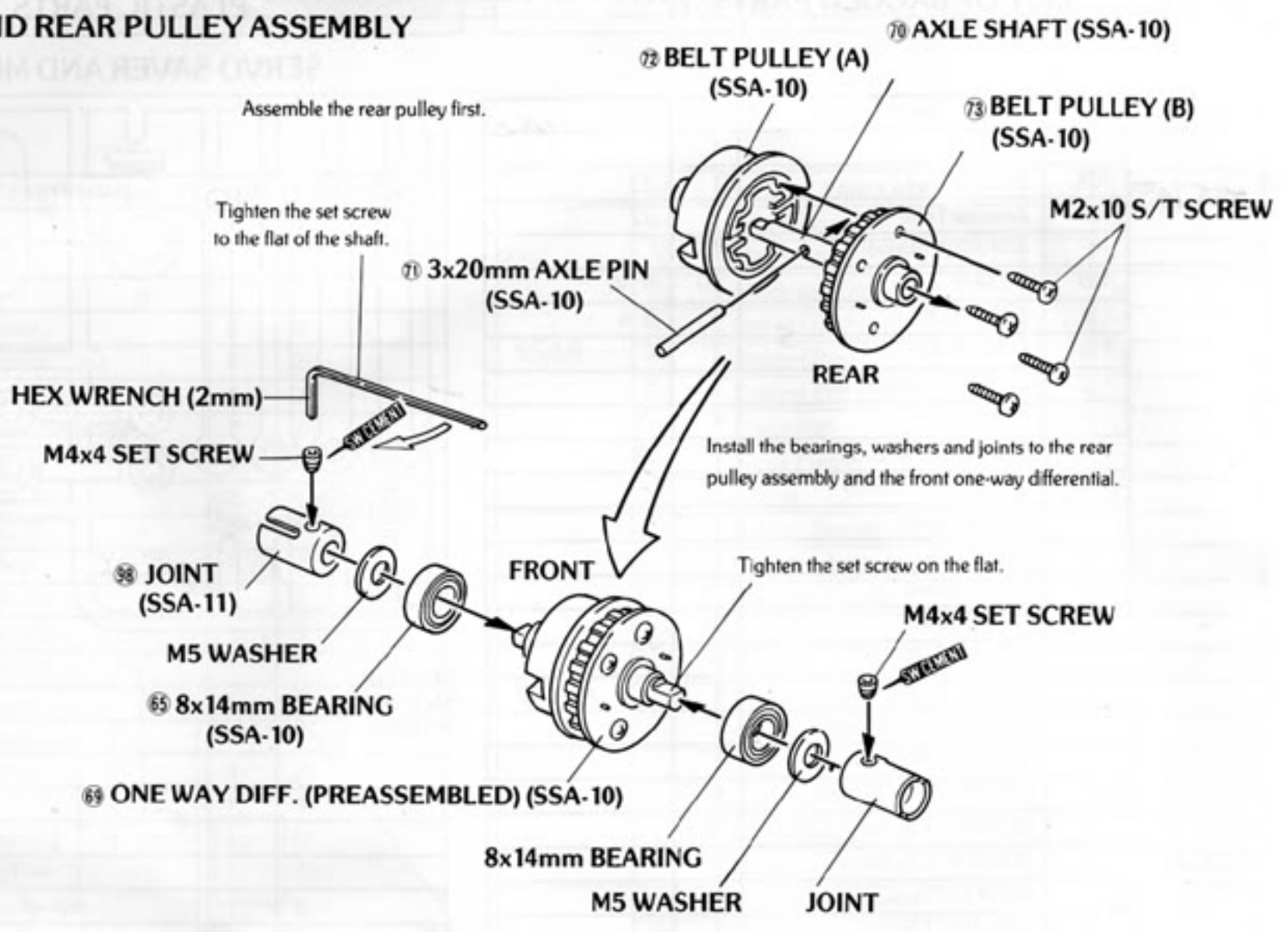


Press the bearing straight in.



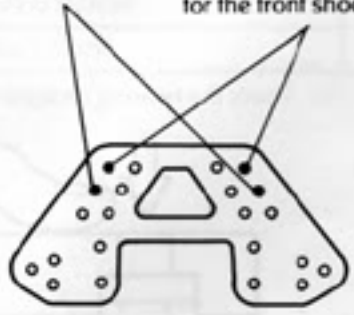
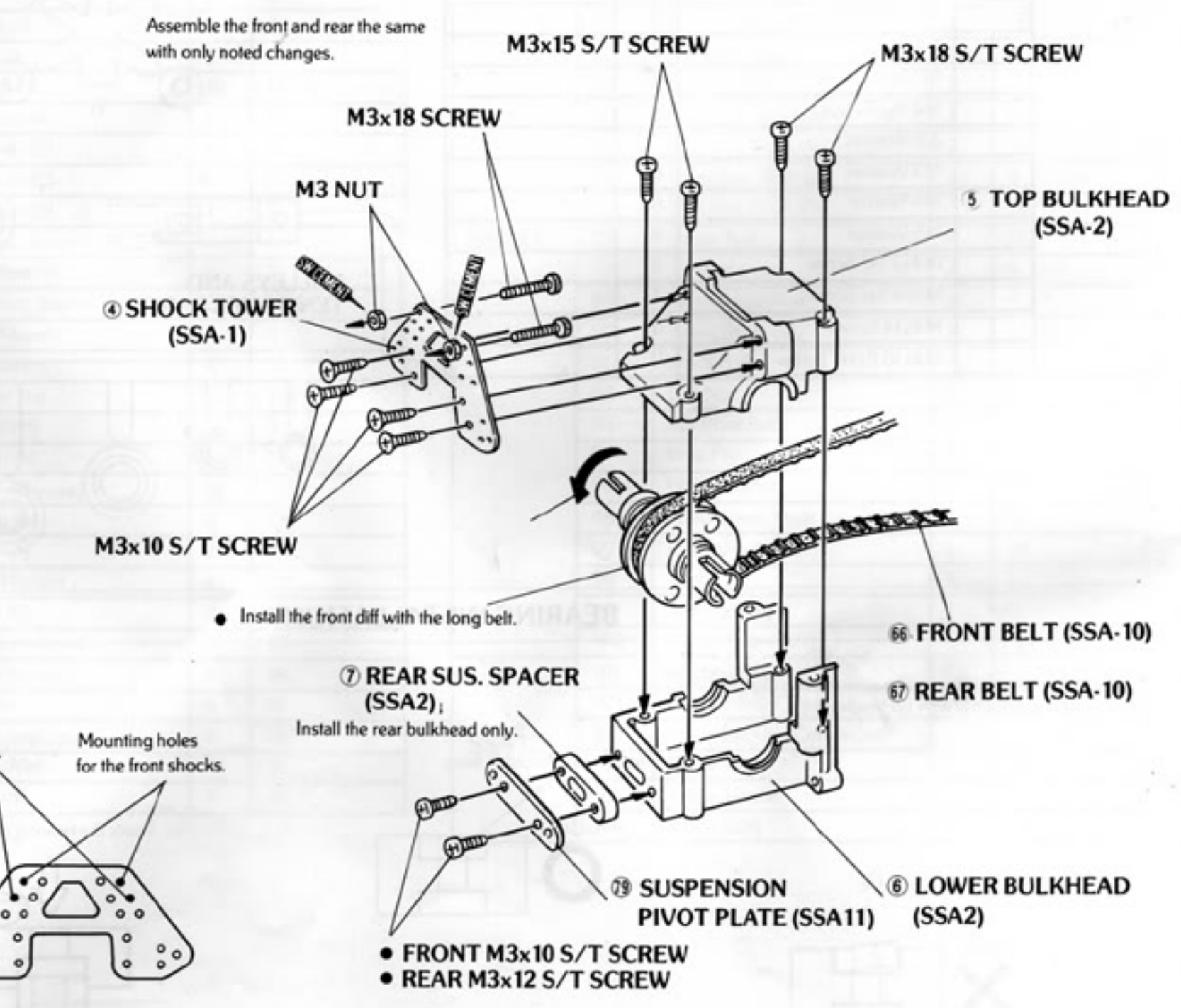
# 1 FRONT DIFF AND REAR PULLEY ASSEMBLY

- M2x10 S/T SCREW (4)
- M4x4 SET SCREW (4)
- M5 WASHER (4)
- 8x14mm BEARING (4)
- 3x20mm DIFF. PIN (1)



# 2 FRONT AND REAR BULK HEADS

- M3x10 S/T SCREW (10)
- M3x12 S/T SCREW (2)
- M3x15 S/T SCREW (4)
- M3x18 S/T SCREW (4)
- M3x18 SCREW (4)
- M3 NUT (4)





### 3 COUNTER GEAR ASSEMBLY

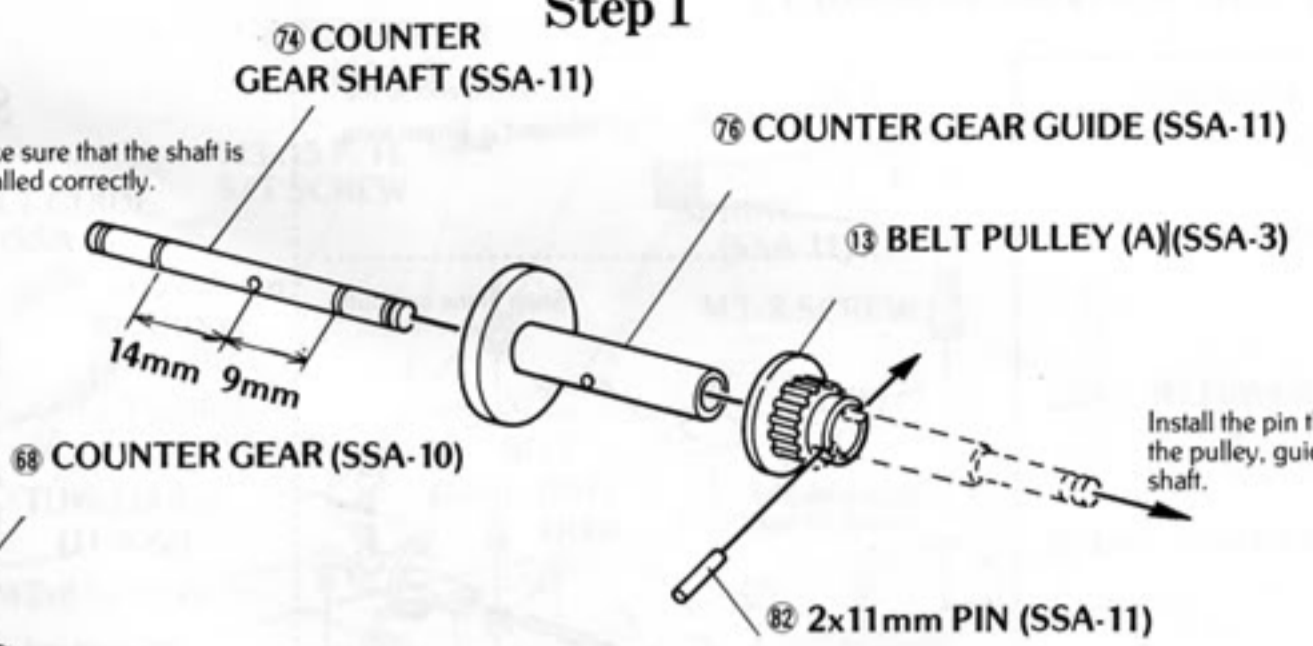
- ⑪ E-Clip (E-3) (2)
- ⑧② 2x11mm Pin (1)

Follow the steps.

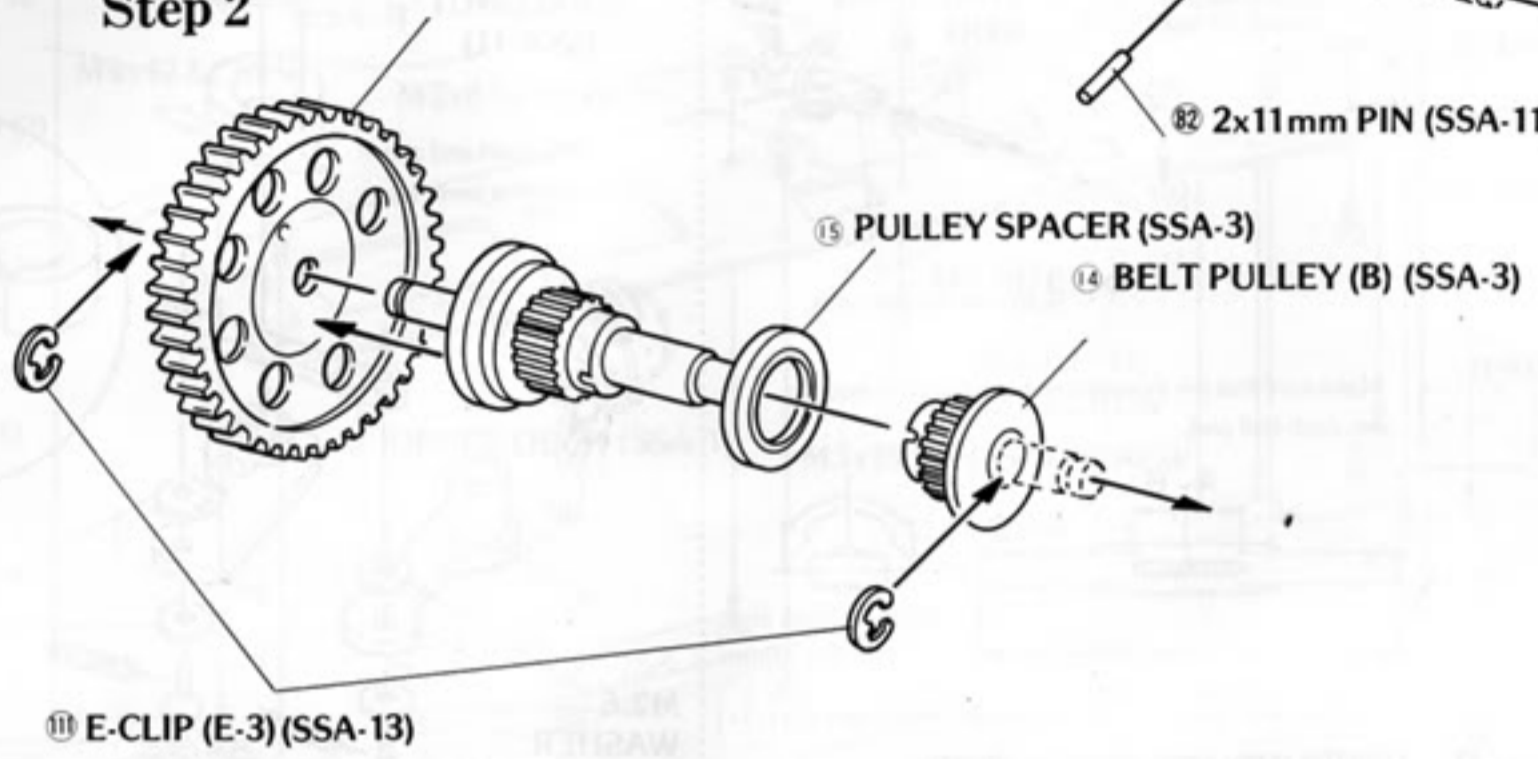


Make sure that the shaft is installed correctly.

#### Step 1



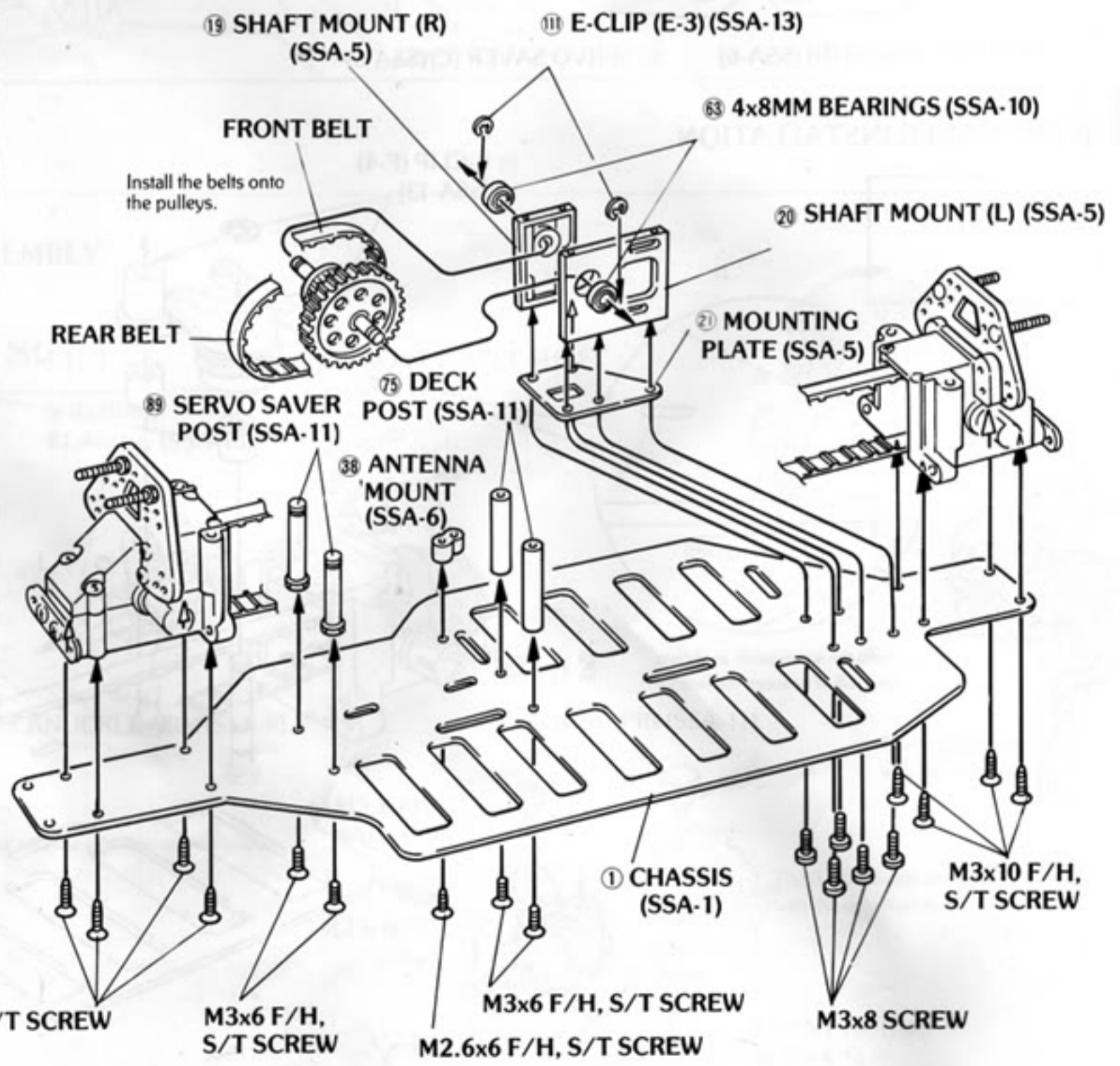
#### Step 2



### 4 CHASSIS ASSEMBLY

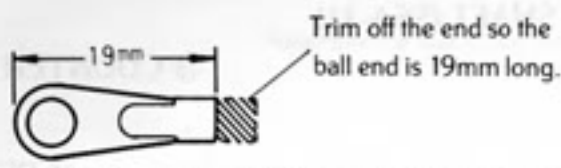
- M3x8 SCREW (5)
- M3x6 F/H, S/T SCREW (4)
- M3x10 F/H, S/T SCREW (8)
- M2.6x6 F/H, S/T SCREW (1)
- ⑪ E-CLIP (2)
- ⑥③ 4x8MM BEARINGS (2)

FRONT ←

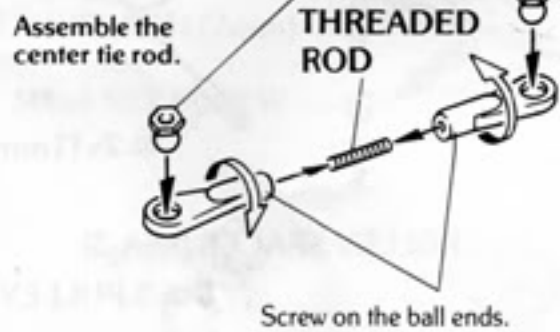


# 5 SERVO SAVER ASSEMBLY

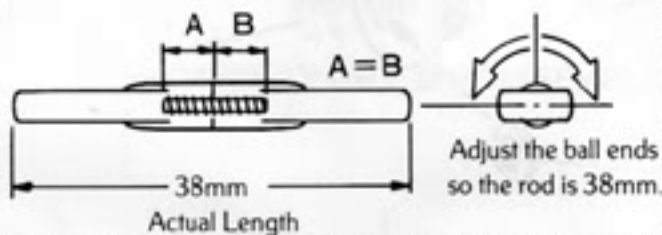
- M2.6x6 SCREW (1)
- M2.6 WASHER (4)
- 93 BALL NUT (3)
- 81 M2.6 PIVOT BALL (2)
- 41 BALL END (SMALL) (2)
- 112 240mm THREADED ROD (1) (SSA13)



## Step 1



Make sure that the threaded rod is screwed in equally into each ball end.



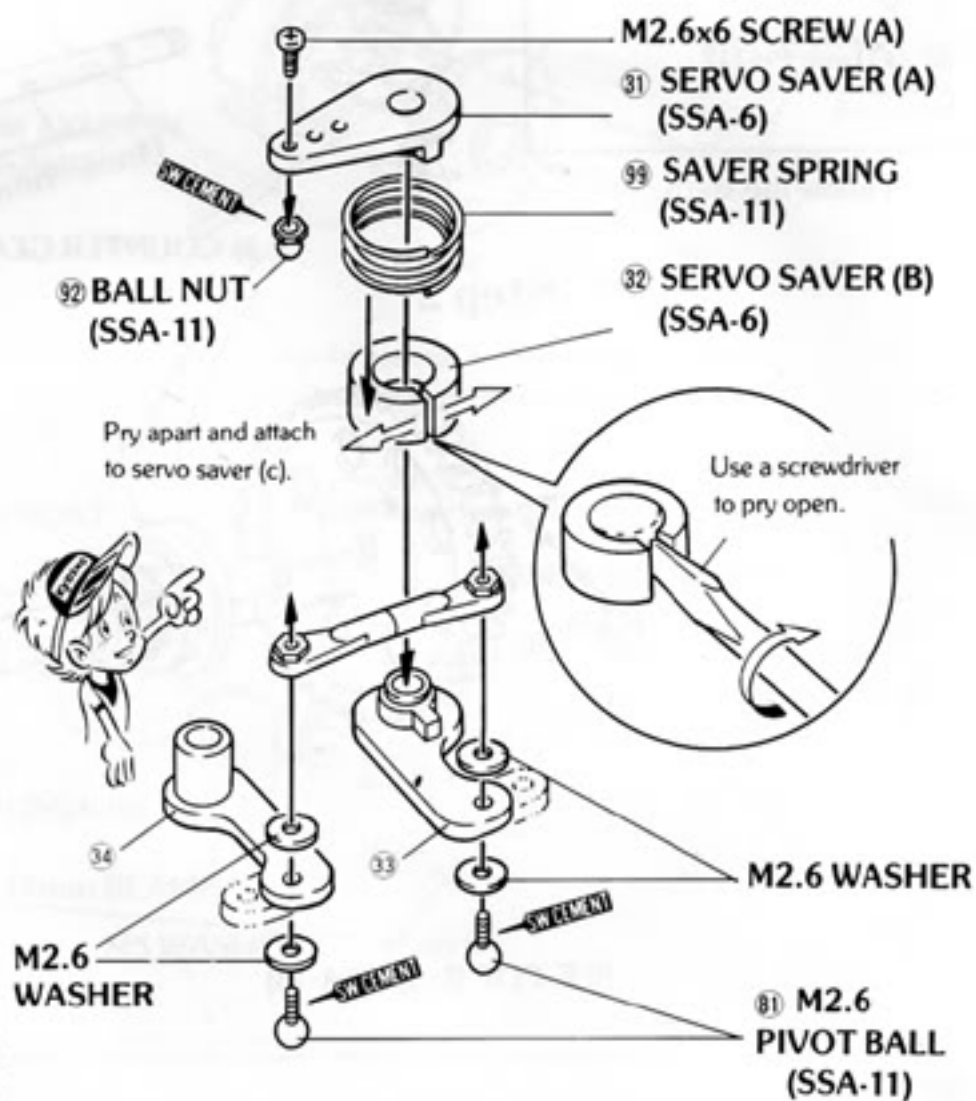
## Step 2

Trim the servo saver pieces as shown. Remove the shaded areas.



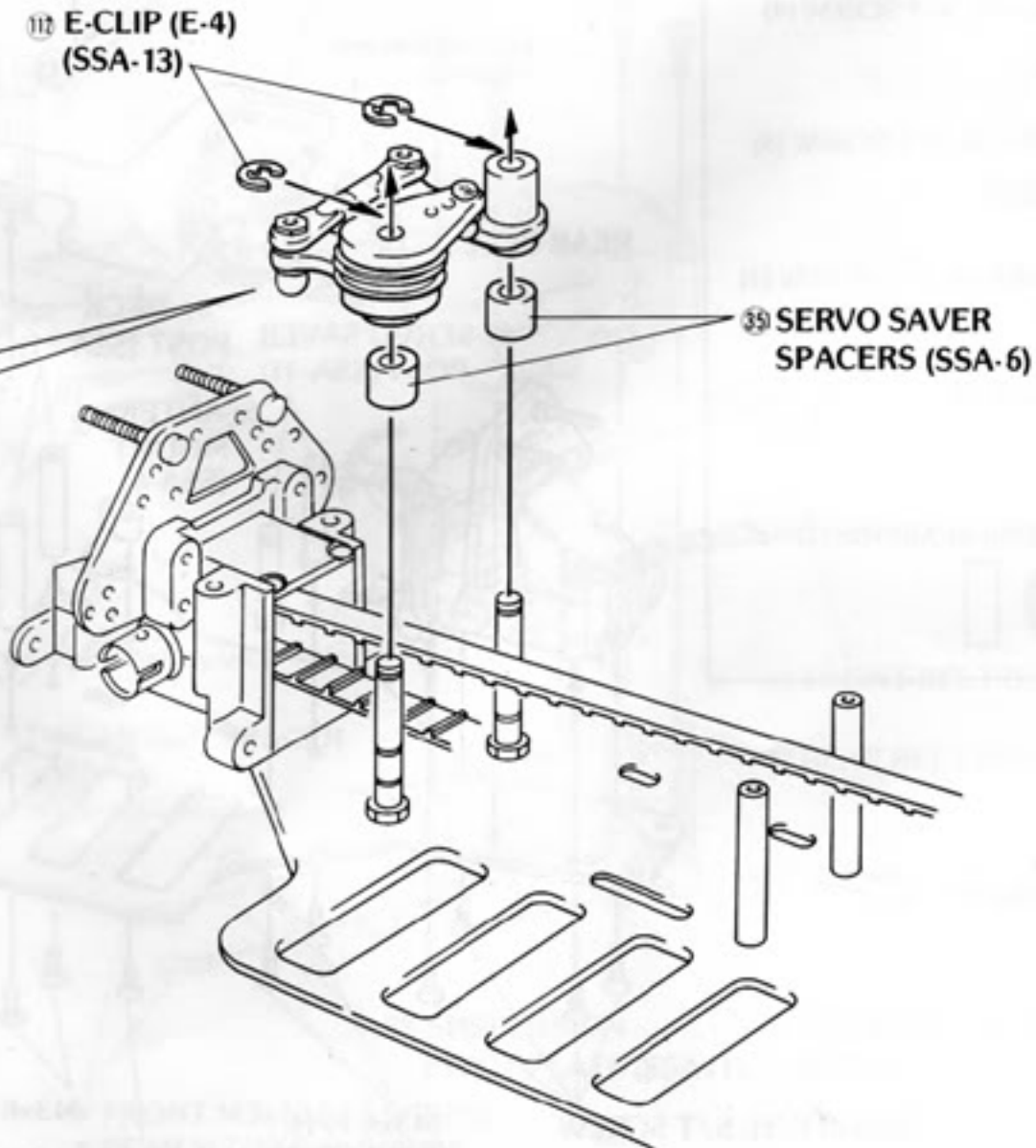
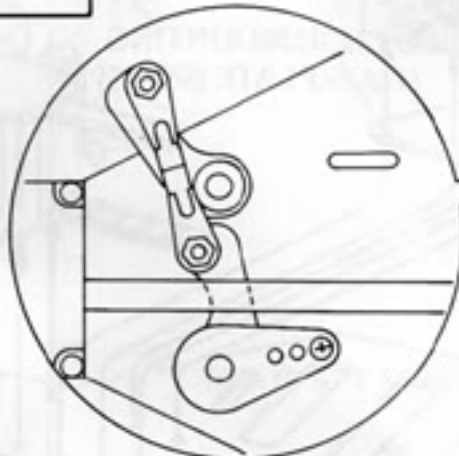
34 SERVO SAVER (D) (SSA-6)      33 SERVO SAVER (C) (SSA-6)

## Step 3 Final Servo Saver Assembly



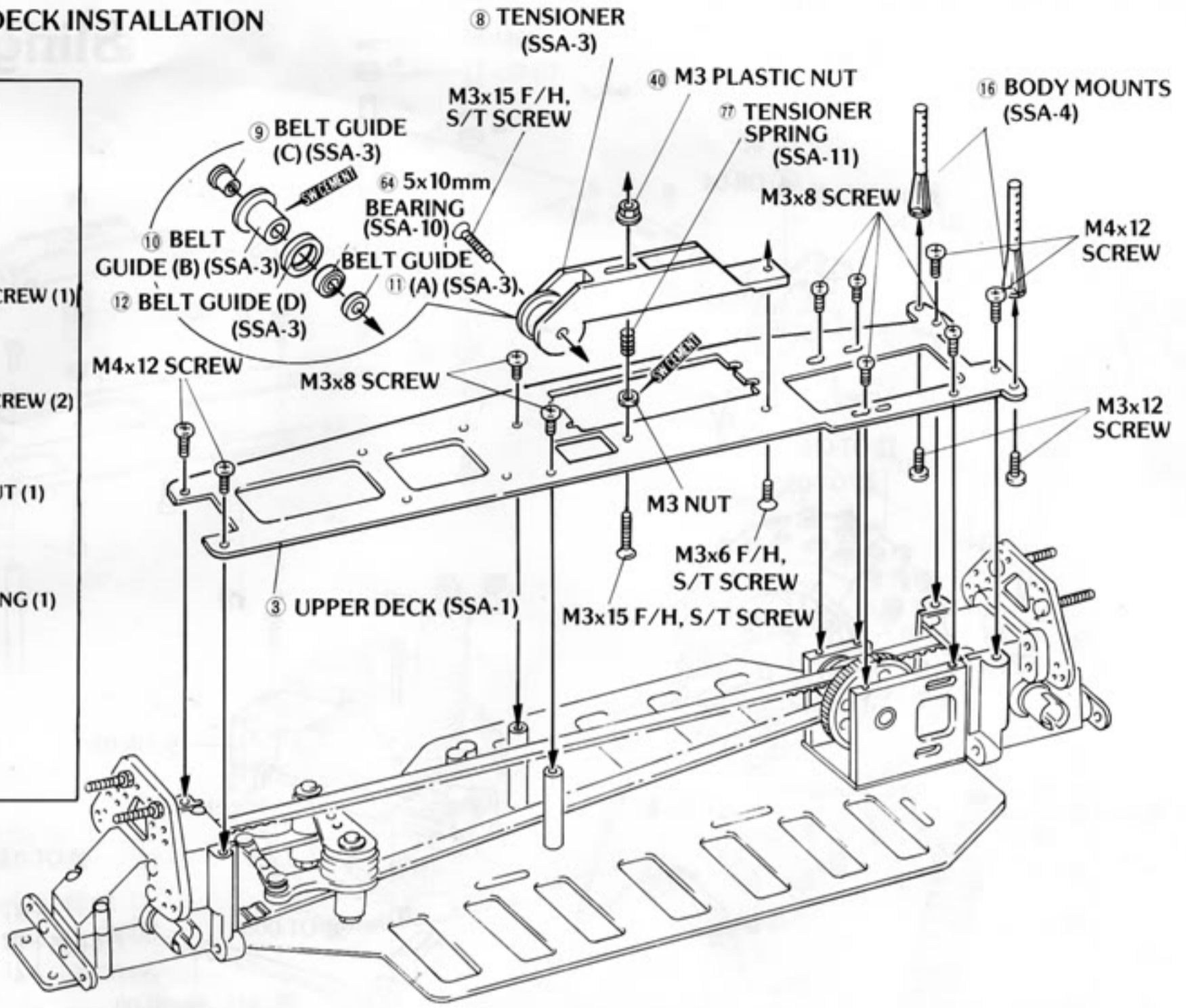
# 6 SERVO SAVER INSTALLATION

- 112 E-Clip (E-4) (2)



# 7 UPPER DECK INSTALLATION

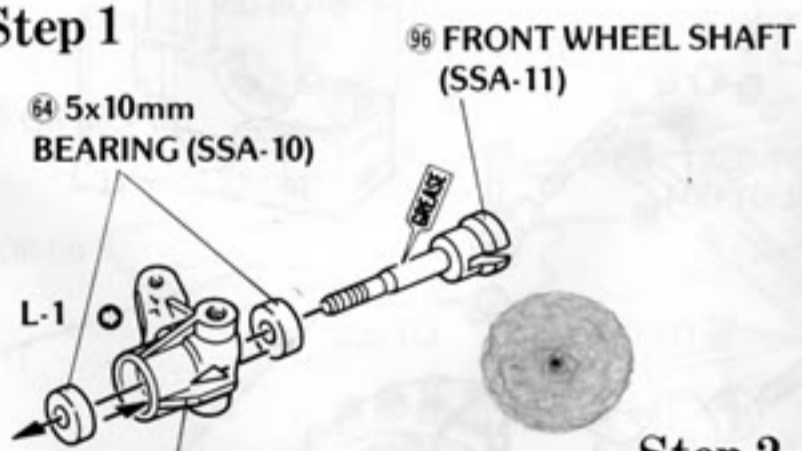
- M4x12 SCREW (4)
- M3x8 SCREW (6)
- M3x6 F/H, S/T SCREW (1)
- M3x15 F/H, S/T SCREW (2)
- M3 PLASTIC NUT (1)
- 5x10mm BEARING (1)
- M3 NUT (1)



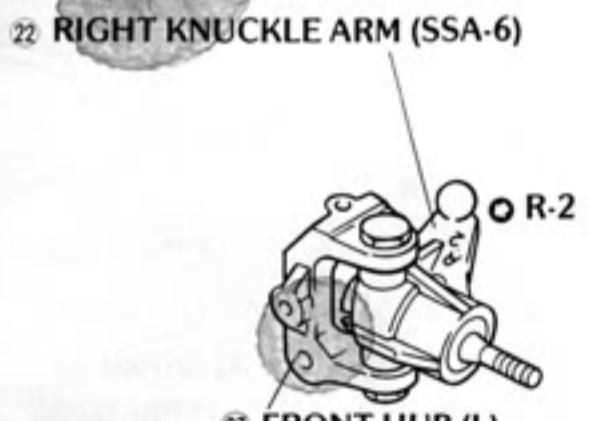
# 8 KNUCKLE ARM ASSEMBLY

- M2.6 NUT (2)
- 5x10MM BEARING (4)
- M2.6 PIVOT BALL (4)

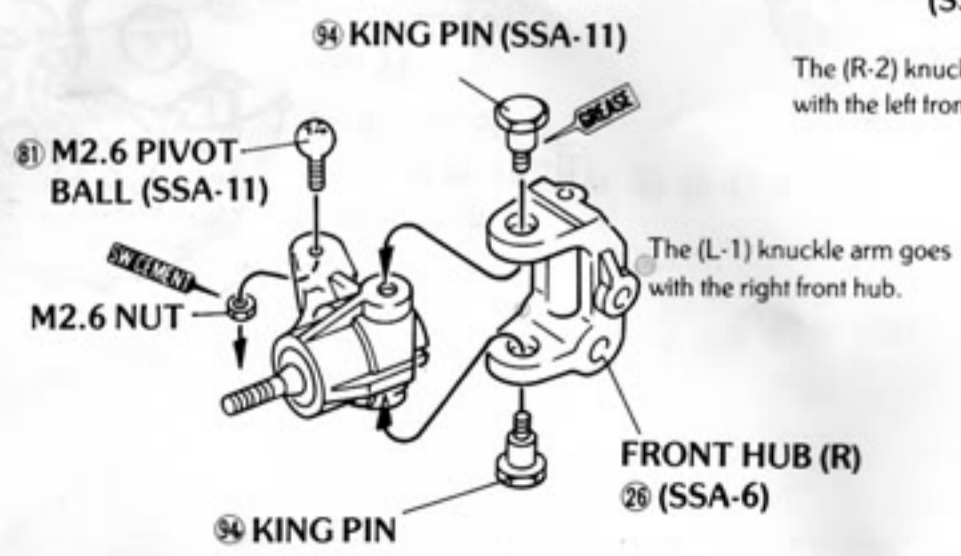
## Step 1



## Step 3



## Step 2

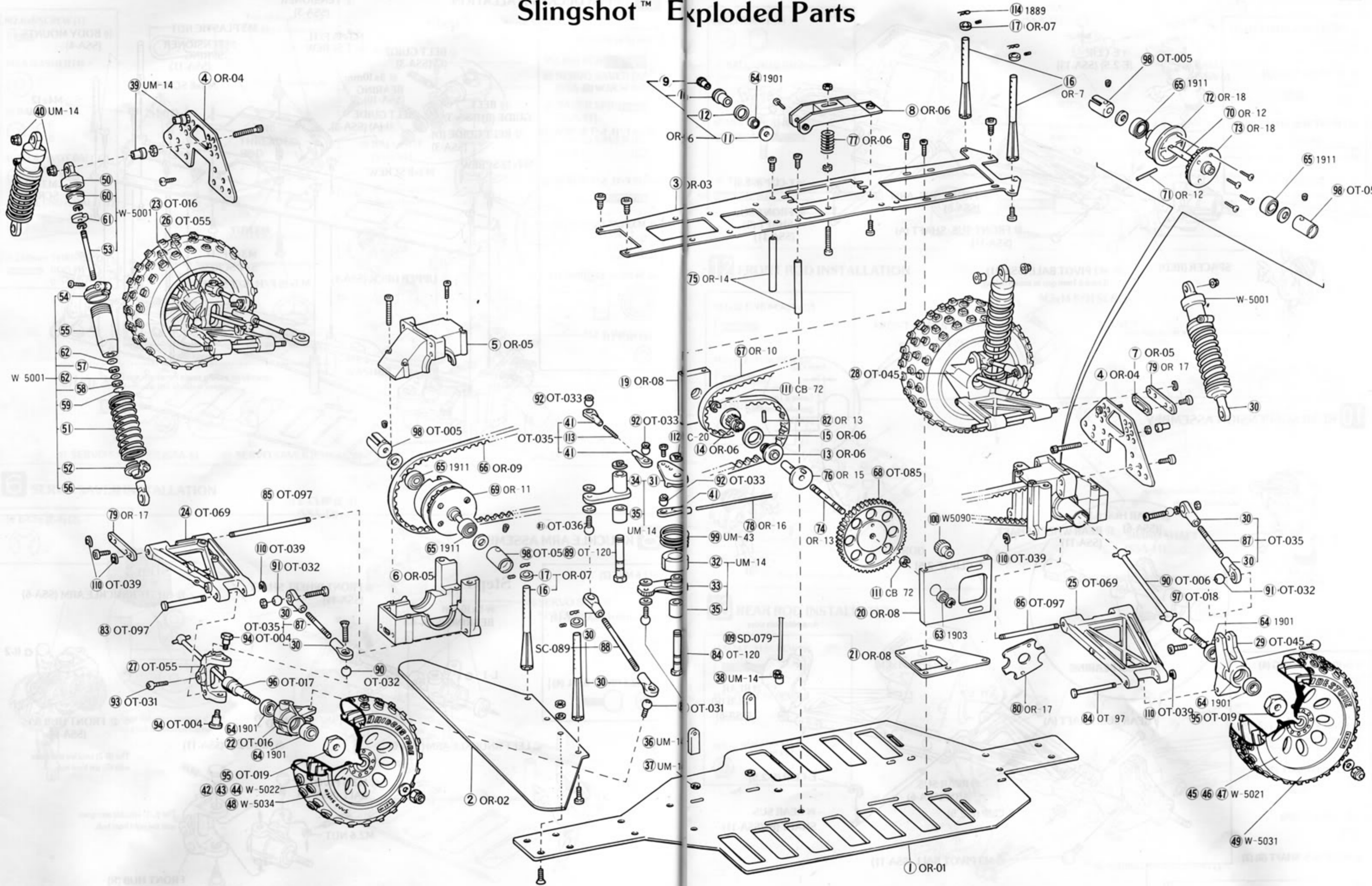


Make sure the bearings seat completely.

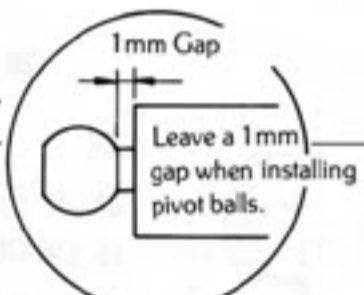
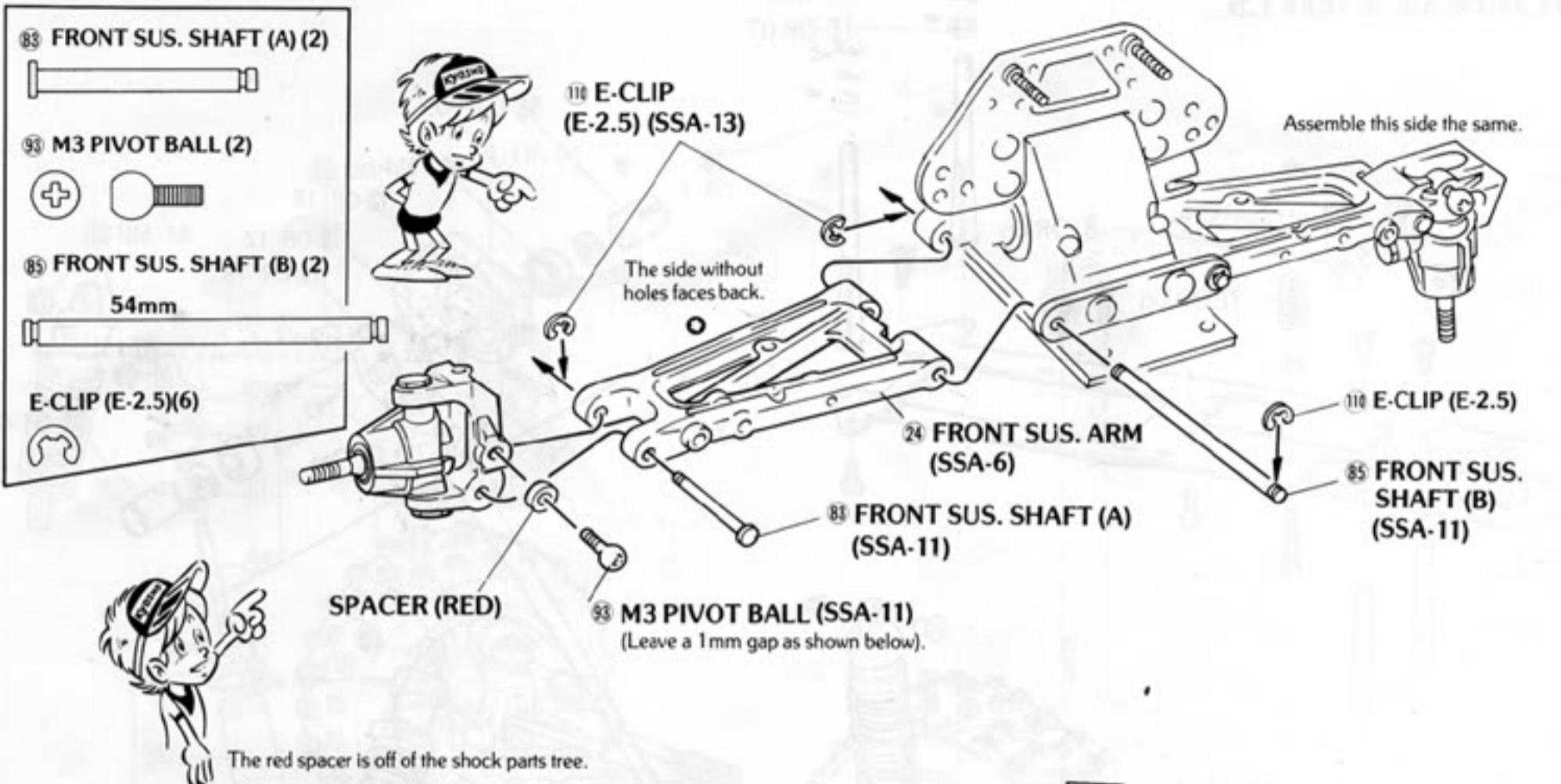
The (R-2) knuckle arm goes with the left front hub.

The (L-1) knuckle arm goes with the right front hub.

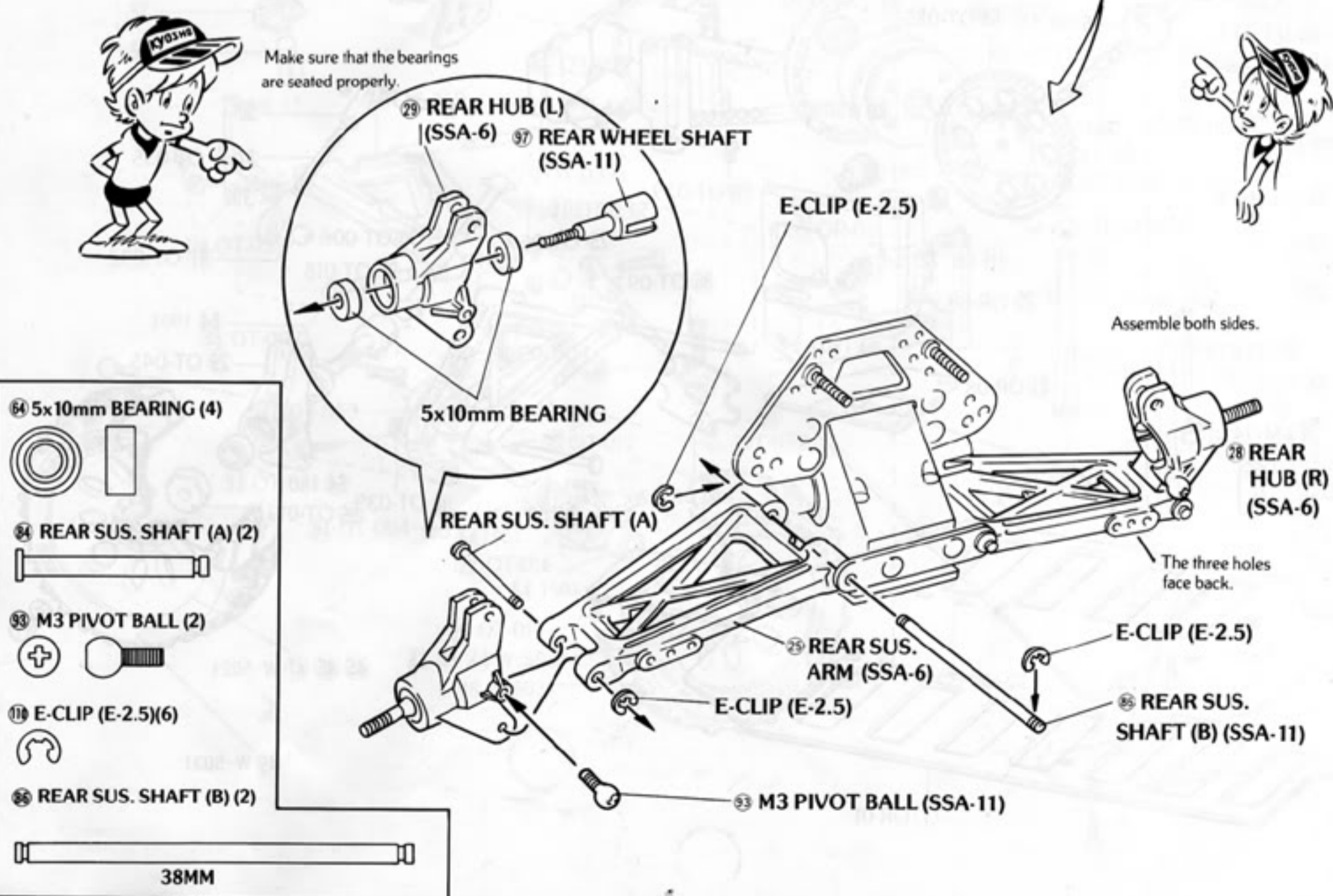
# Slingshot™ Exploded Parts



# 9 FRONT SUSPENSION ASSEMBLY



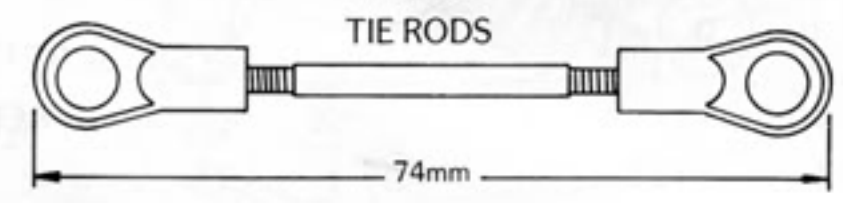
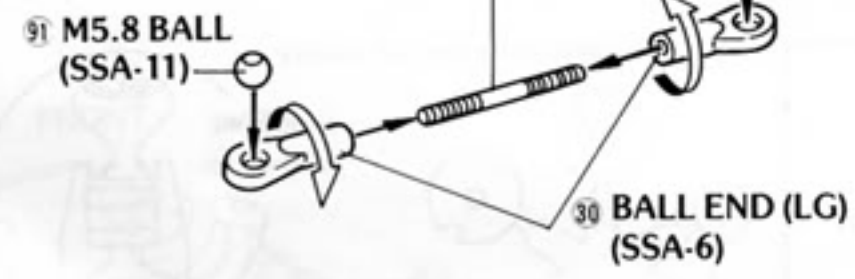
# 10 REAR SUSPENSION ASSEMBLY



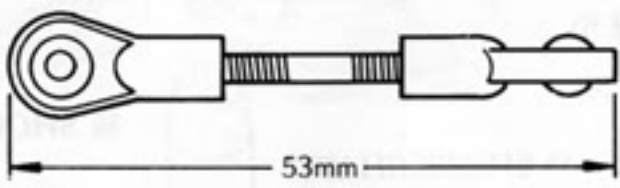
# 11 ROD ASSEMBLY

- 91 M5.8 BALL (8)
- 30 BALL END (LG) (2)
- 87 UPPER ROD (4)
- 88 TIE ROD (2)

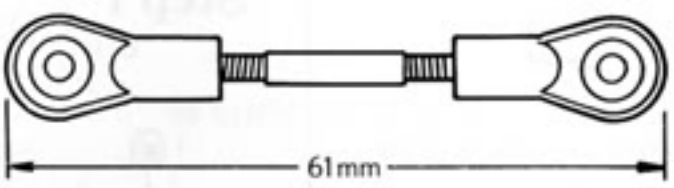
Place the 8 balls into the ball ends of the four upper rods.



Adjust two upper rods to the length below for the front.

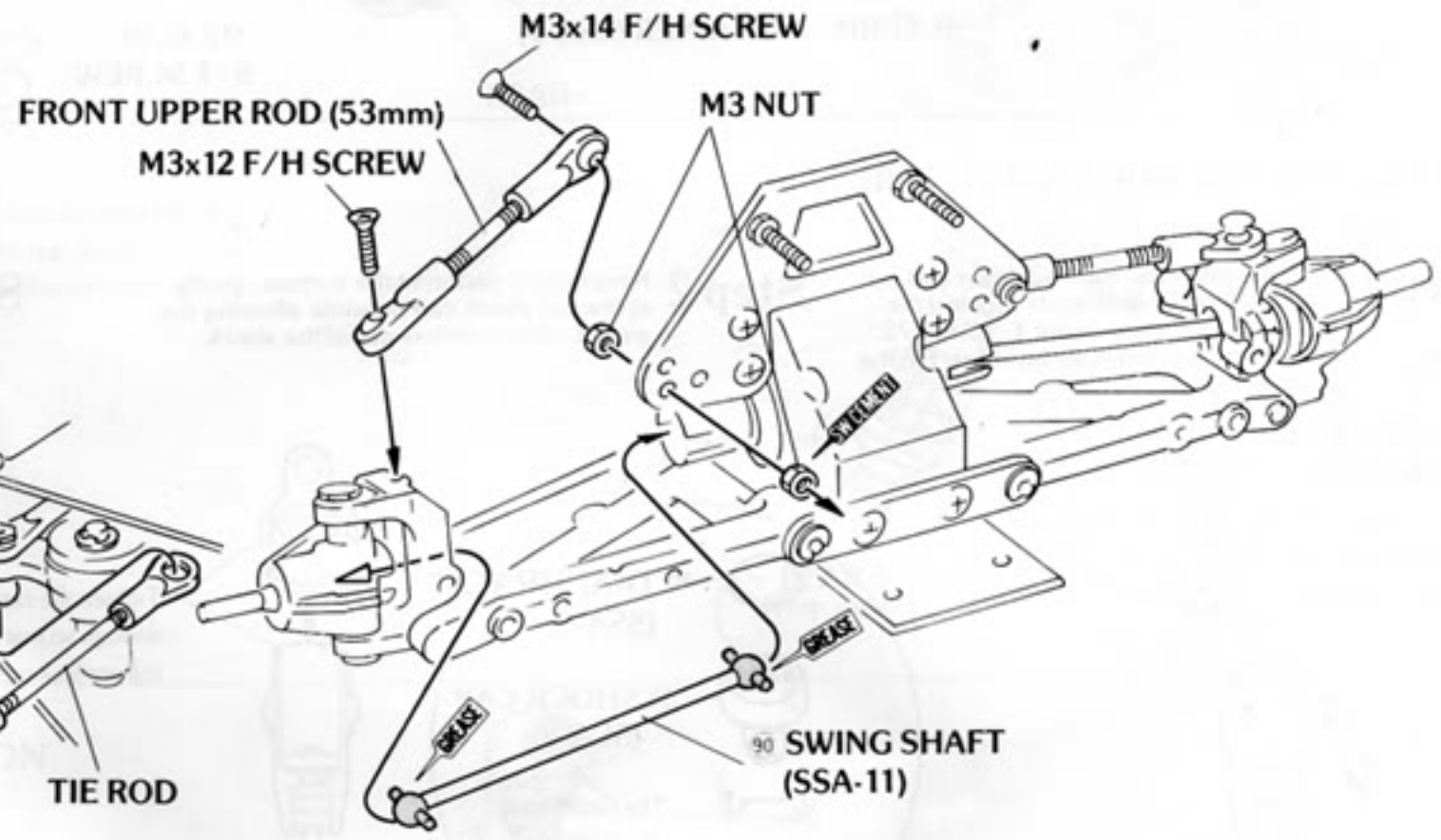


Adjust two upper rods to the length below for the rear.



# 12 FRONT ROD INSTALLATION

- M3x12 F/H, SCREW (2)
- M3x14 F/H SCREW (2)
- M3 NUT (4)

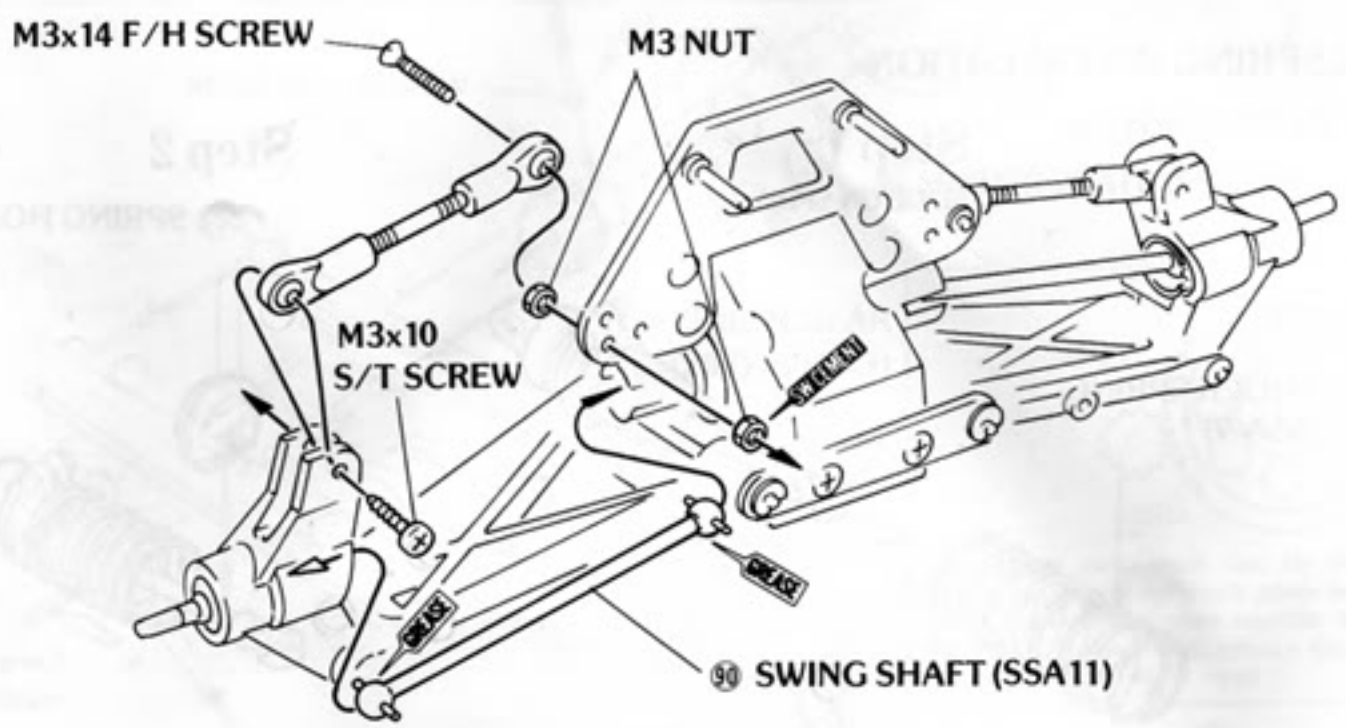


Attach both tie rods to the knuckles.

Install the swing shafts first and then the upper rods.

# 13 REAR ROD INSTALLATION

- M3x14 F/H SCREW (2)
- M3x10 S/T SCREW (2)
- M3 NUT (4)

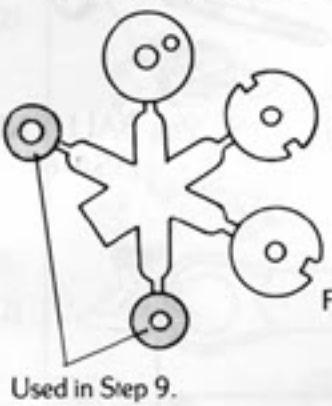


# 14 SHOCK ASSEMBLY

(All parts are in bag SSA-9).

- 118 E-CLIP (E-2.5) (8)
- 59 RETAINER CLIP (4)
- M2.6x10 S/T SCREW (4)
- 56 SHOCK BALL END (2)
- 30 BALL END (LG) (2)

Use this piston for the best performance.



Snap in the retainer clip.

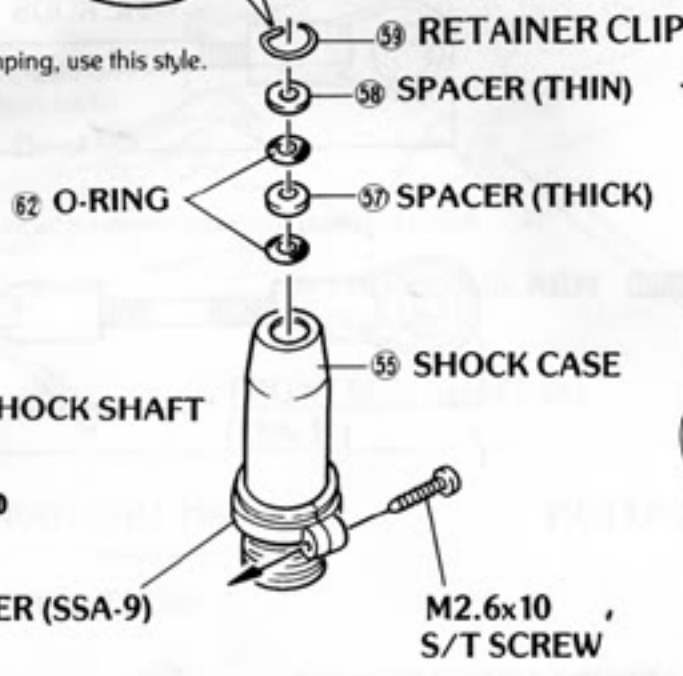
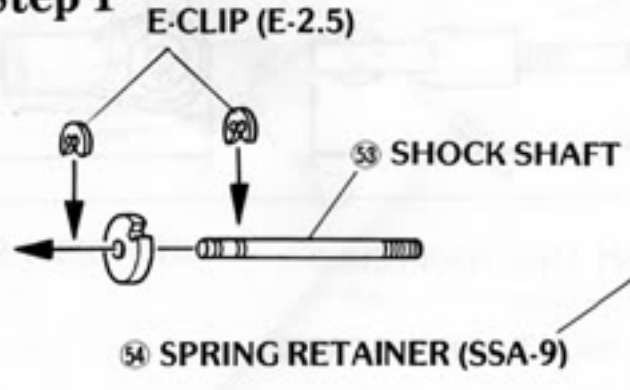
For more damping, use this style.

## Step 2

## Step 3

Install the two smaller shock ball ends for the front shocks. Install the large ball ends for the rear shocks.

## Step 1

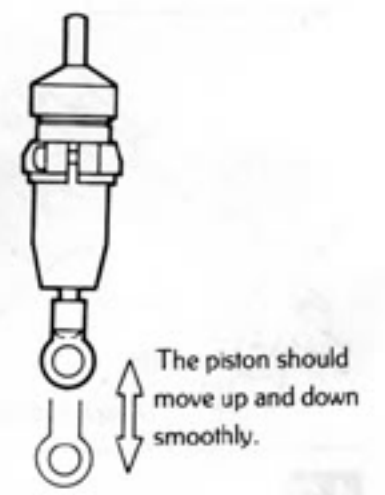
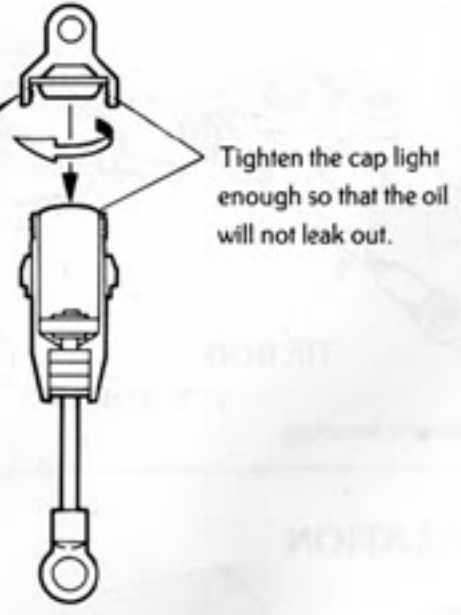


# 15 FILLING THE SHOCK WITH OIL

**Step 1** Push the piston all the way down and put the oil in little by little while moving the piston up and down about 1/4" to 1/2". This will help remove air bubbles. Fill the shock full of oil.

**Step 2** Keeping the piston at the bottom, gently screw the shock cap on while allowing the excess oil to overflow out of the shock.

**Step 3** Check to see if the shock piston will move correctly by operating the shock.

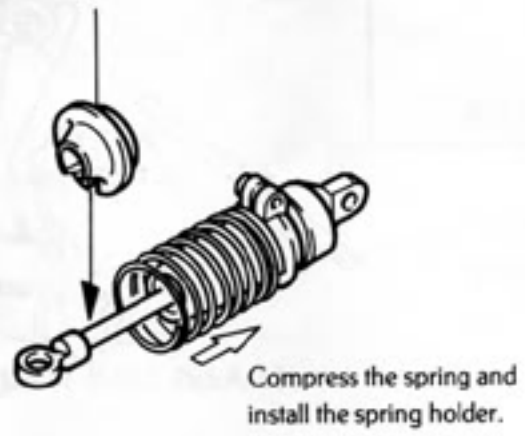
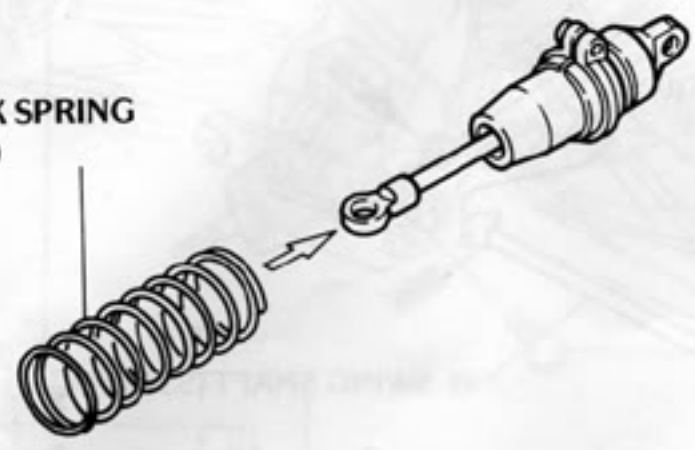


# 16 SHOCK SPRING INSTALLATION

**Step 1**  
SLIDE ON SPRING

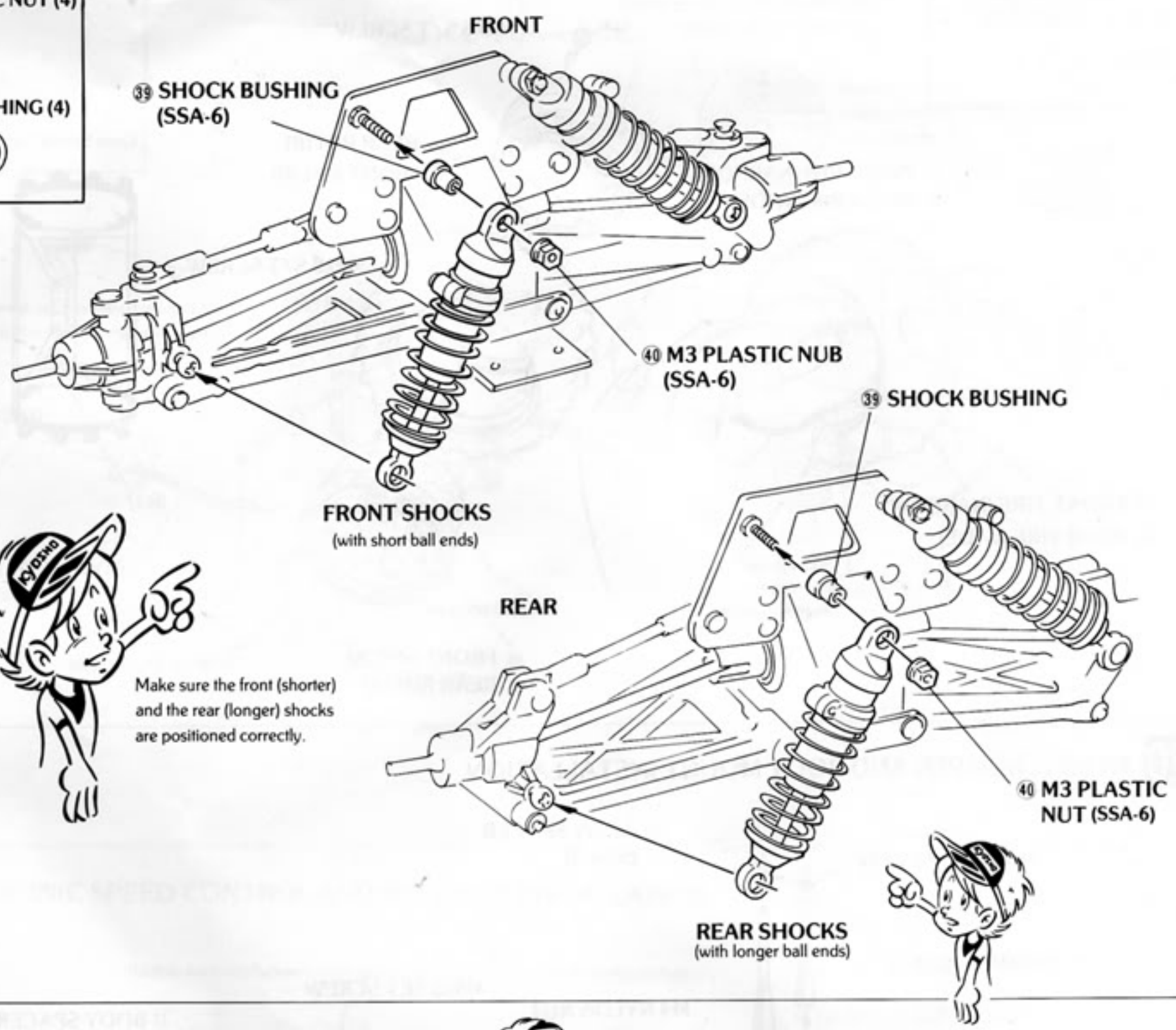
**Step 2**  
52 SPRING HOLDER (SSA-9)

51 SHOCK SPRING (SSA-9)



# 17 SHOCK INSTALLATION

- 40 M3 PLASTIC NUT (4)
- 39 SHOCK BUSHING (4)

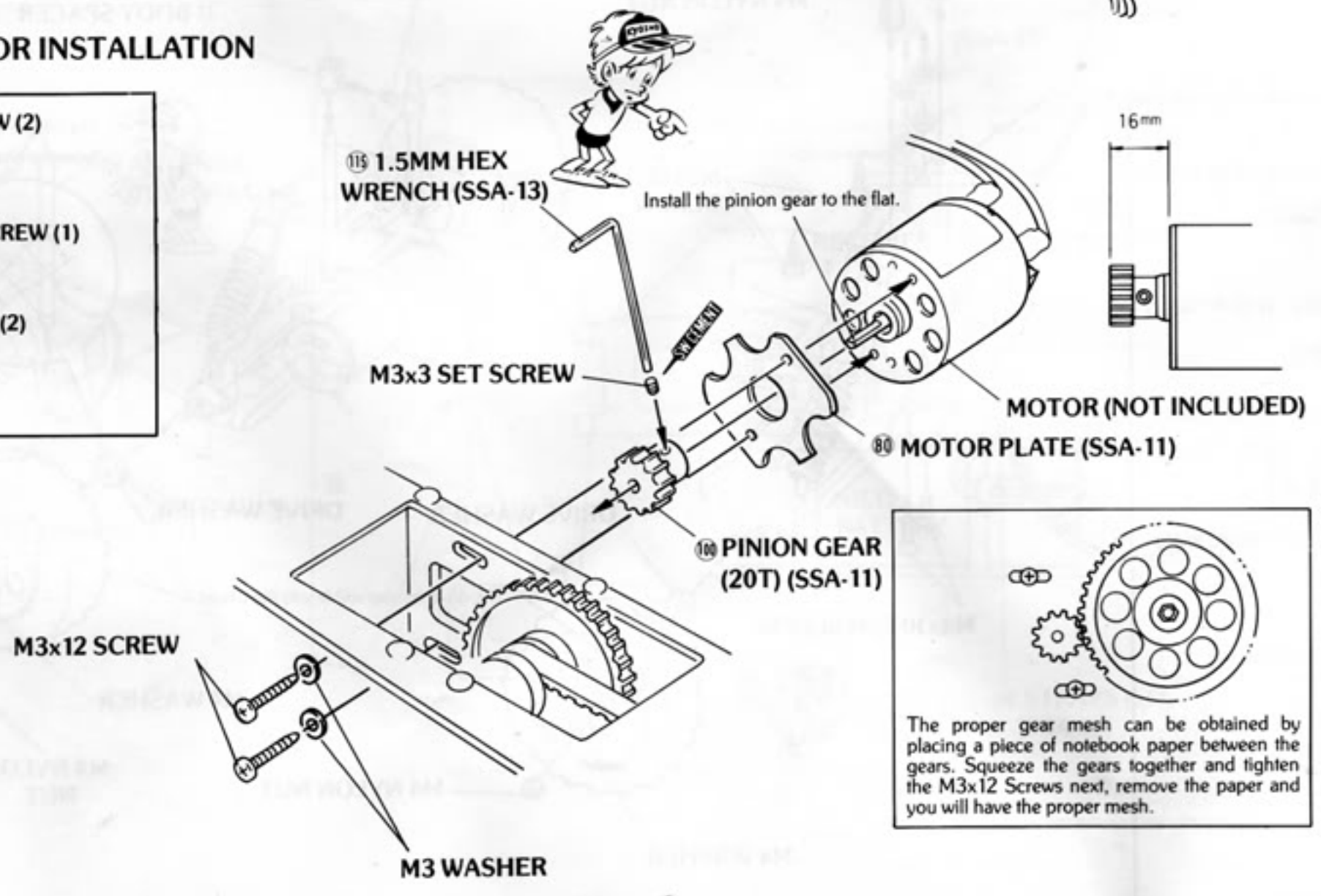


Make sure the front (shorter) and the rear (longer) shocks are positioned correctly.



# 18 MOTOR INSTALLATION

- M3x12 SCREW (2)
- M3x3 SET SCREW (1)
- M3 WASHER (2)

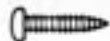


The proper gear mesh can be obtained by placing a piece of notebook paper between the gears. Squeeze the gears together and tighten the M3x12 Screws next, remove the paper and you will have the proper mesh.

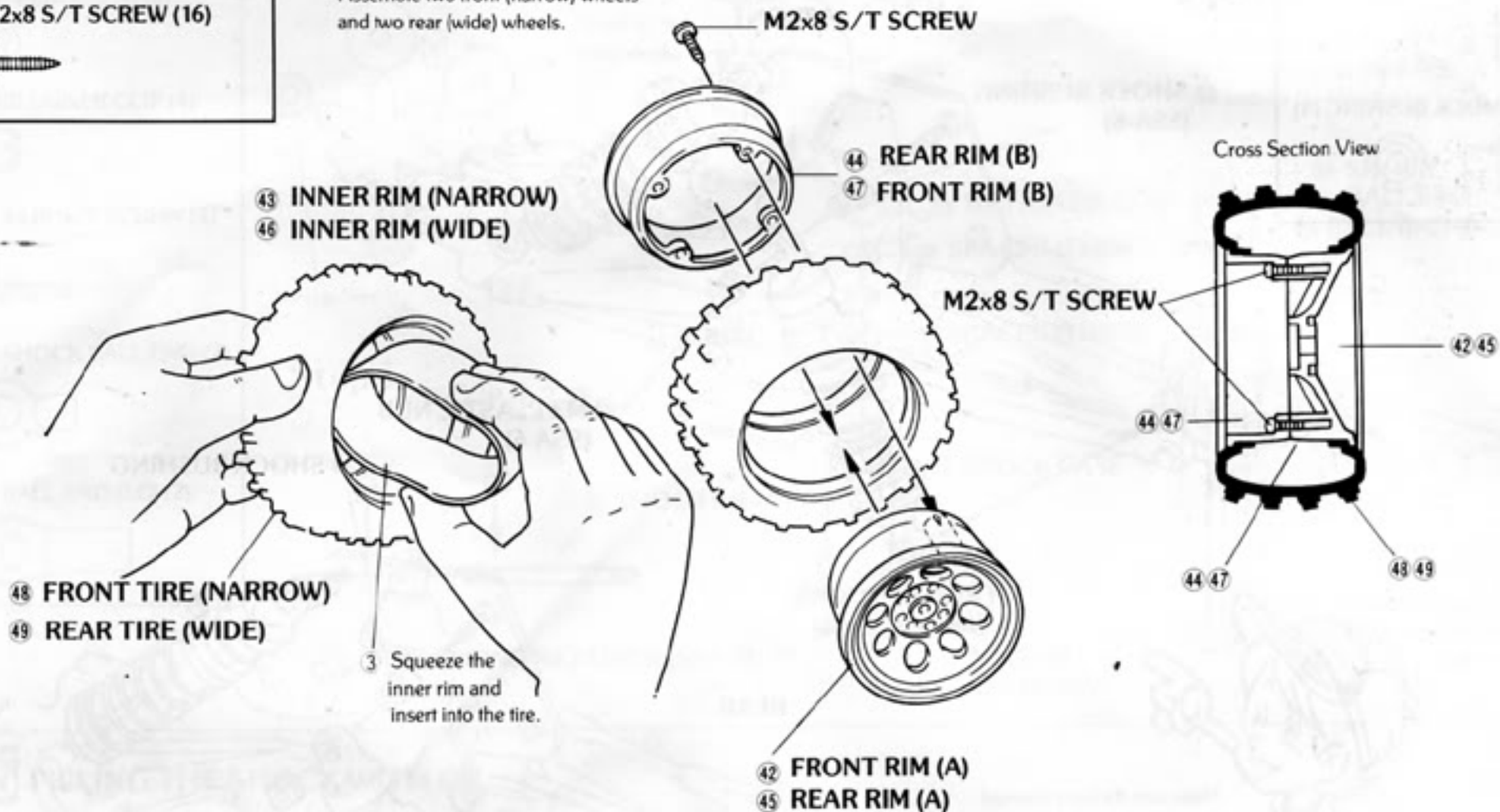


# 19 WHEEL AND TIRE ASSEMBLY

M2x8 S/T SCREW (16)



Assemble two front (narrow) wheels and two rear (wide) wheels.



# 20 WHEEL, BUMPER AND BODY MOUNT INSTALLATION

M3x3 SET SCREW

17 BODY SPACER (SSA-4)

2 BUMPER (SSA-1)

M4 NYLON NUT

M3x3 SET SCREW

17 BODY SPACER

M3x12 S/T SCREW (2)



M4 x10 F/H SCREW (2)



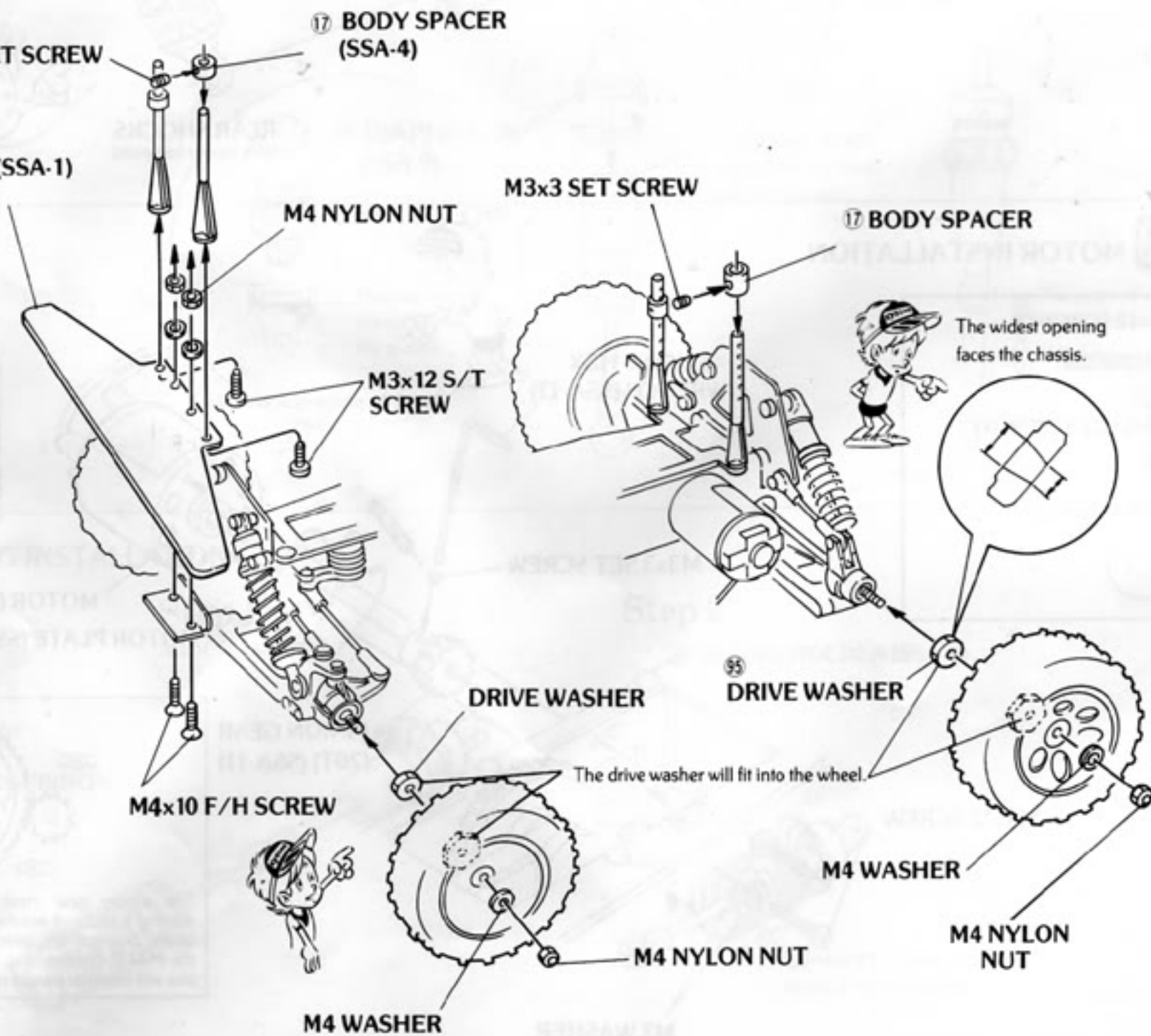
M4 NYLON NUT (6)



M3x3 SET SCREW (4)



M4 WASHER (6)



## 21 STEERING SERVO INSTALLATION

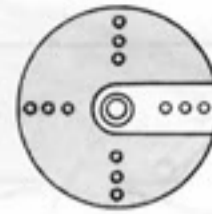
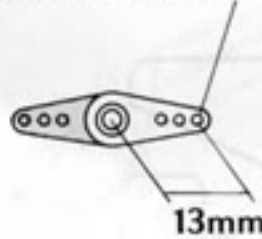
M3x10 S/T SCREW (4)



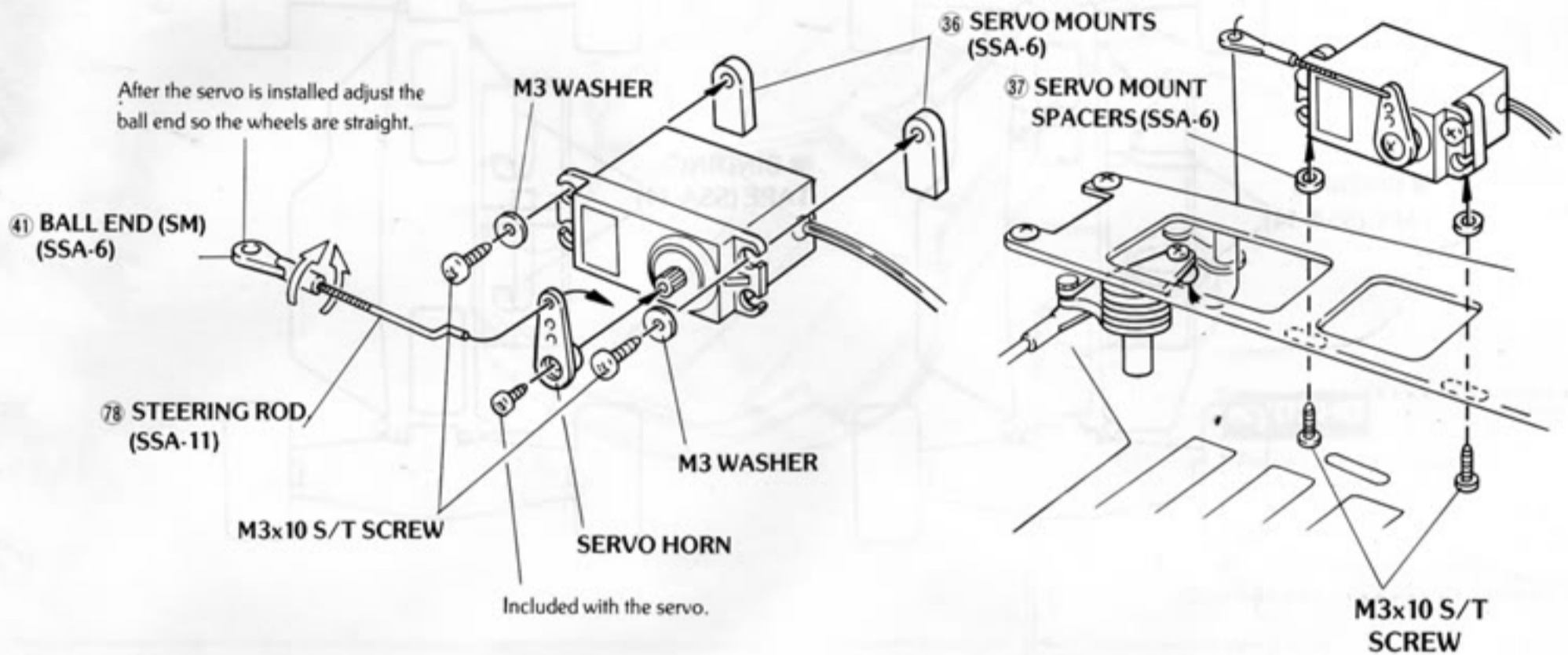
M3 WASHER (2)



Choose a hole 13mm from the center.

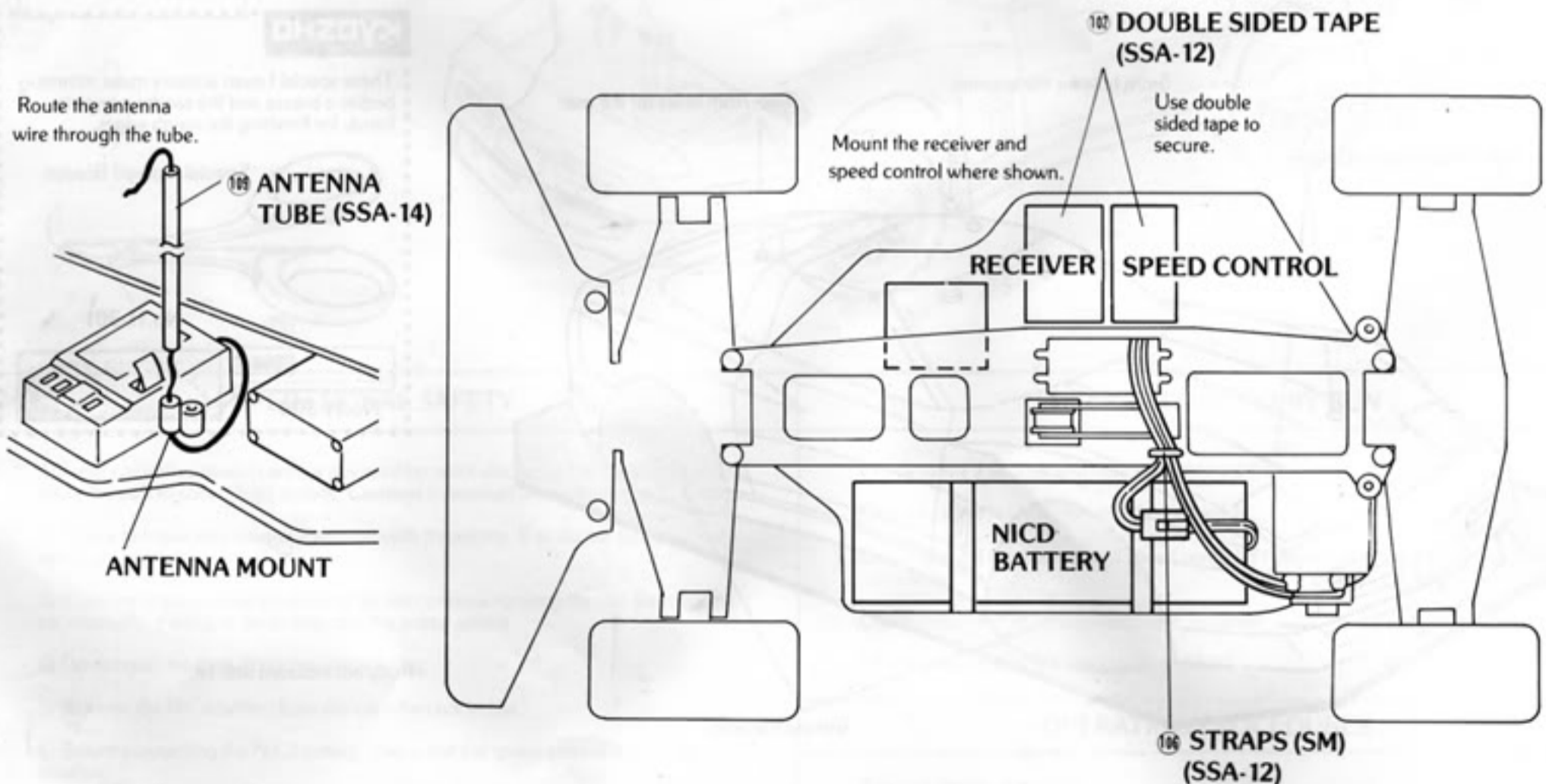


You may need to enlarge the hole slightly for the rod.



## 22 ELECTRONIC SPEED CONTROL AND RECEIVER INSTALLATION

(Follow the manufacturers instructions for proper hook up of the speed control).

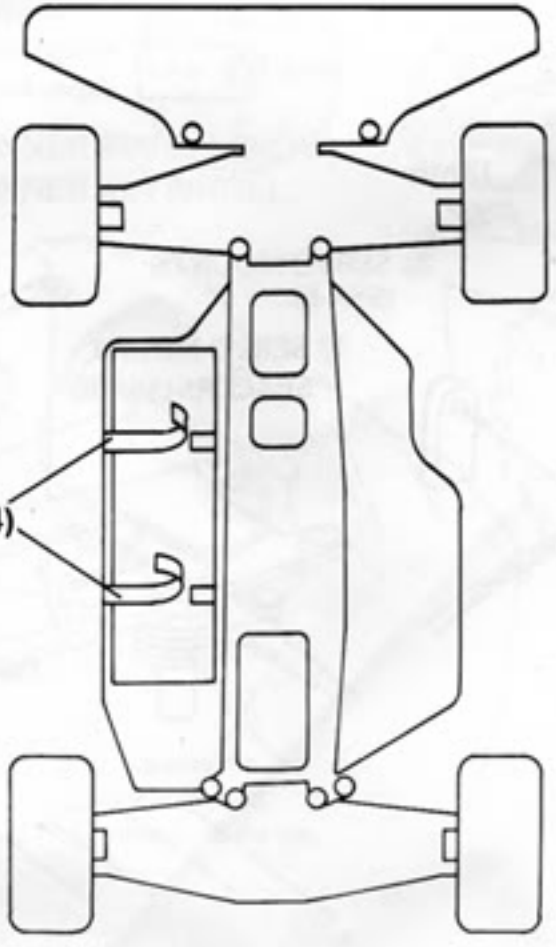


Secure the loose wires with straps.

# 23 MOUNTING THE BATTERY

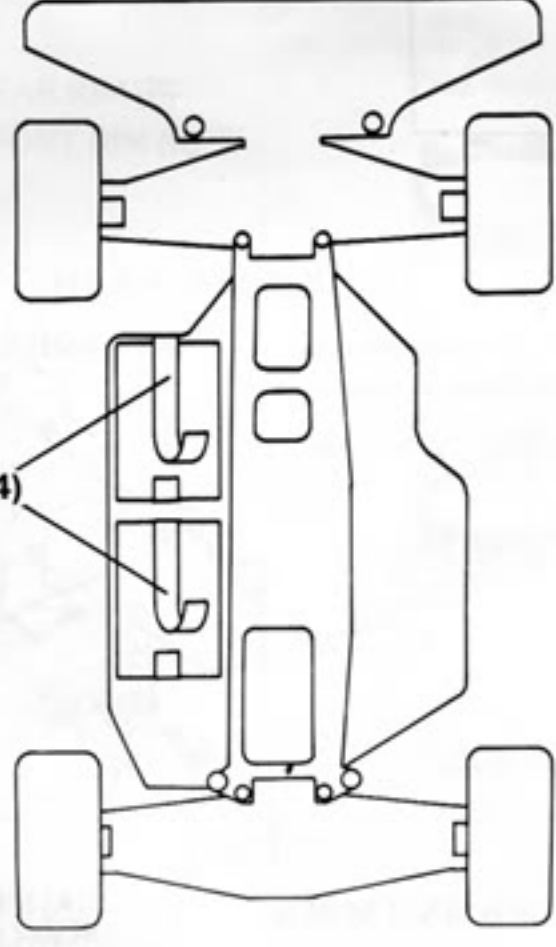
Use the binding tape to secure the battery pack to the chassis.

STICK PACK



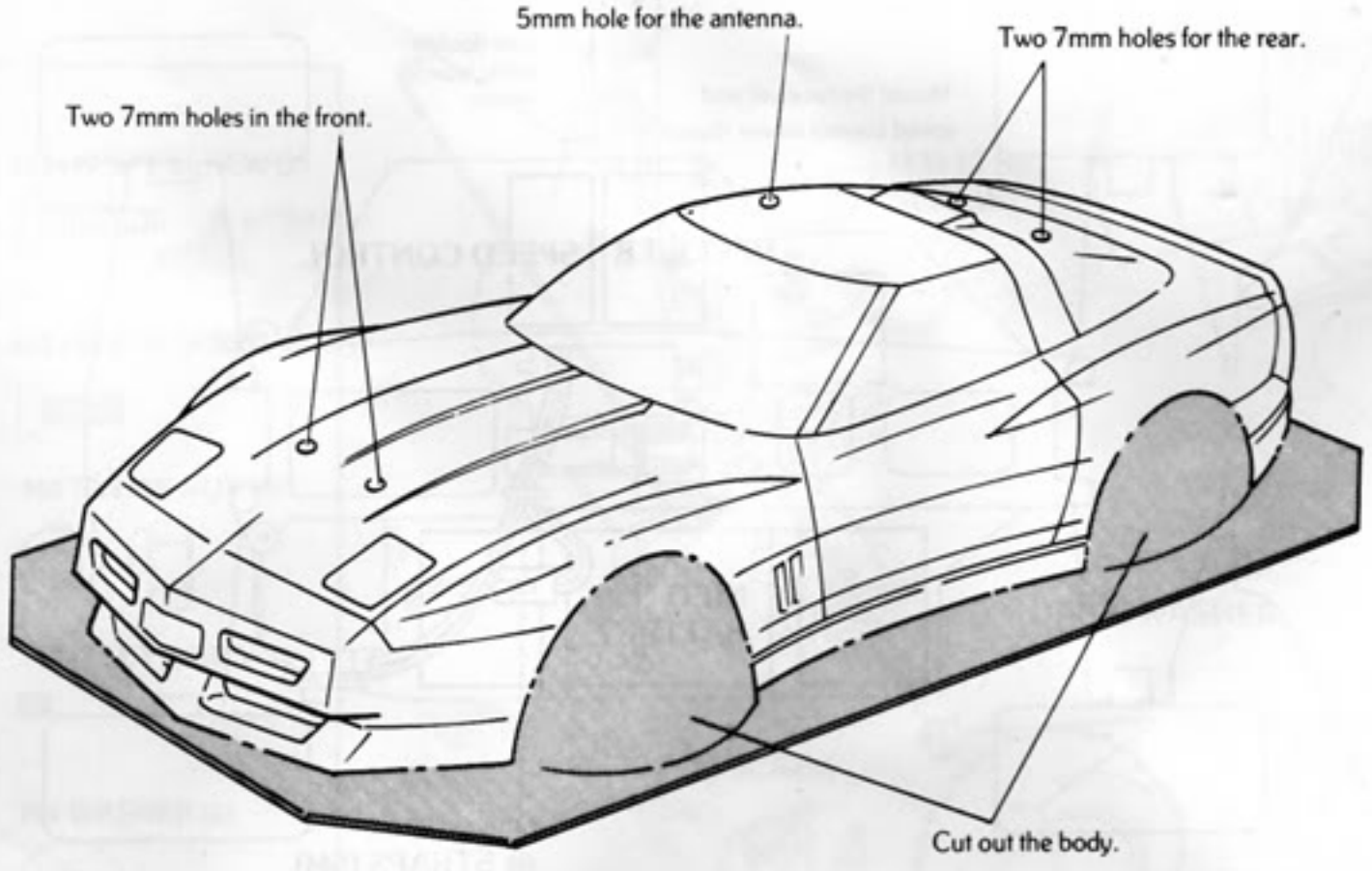
SADDLE PACK

100 BINDING TAPE (SSA-14)



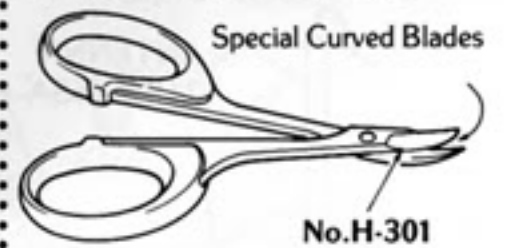
# 24 BODY PREPARATION

There are a number of different body styles that will fit the Slingshot chassis, steps 24 through 26 show an example of one style of body mounting.



## KYOSHO

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

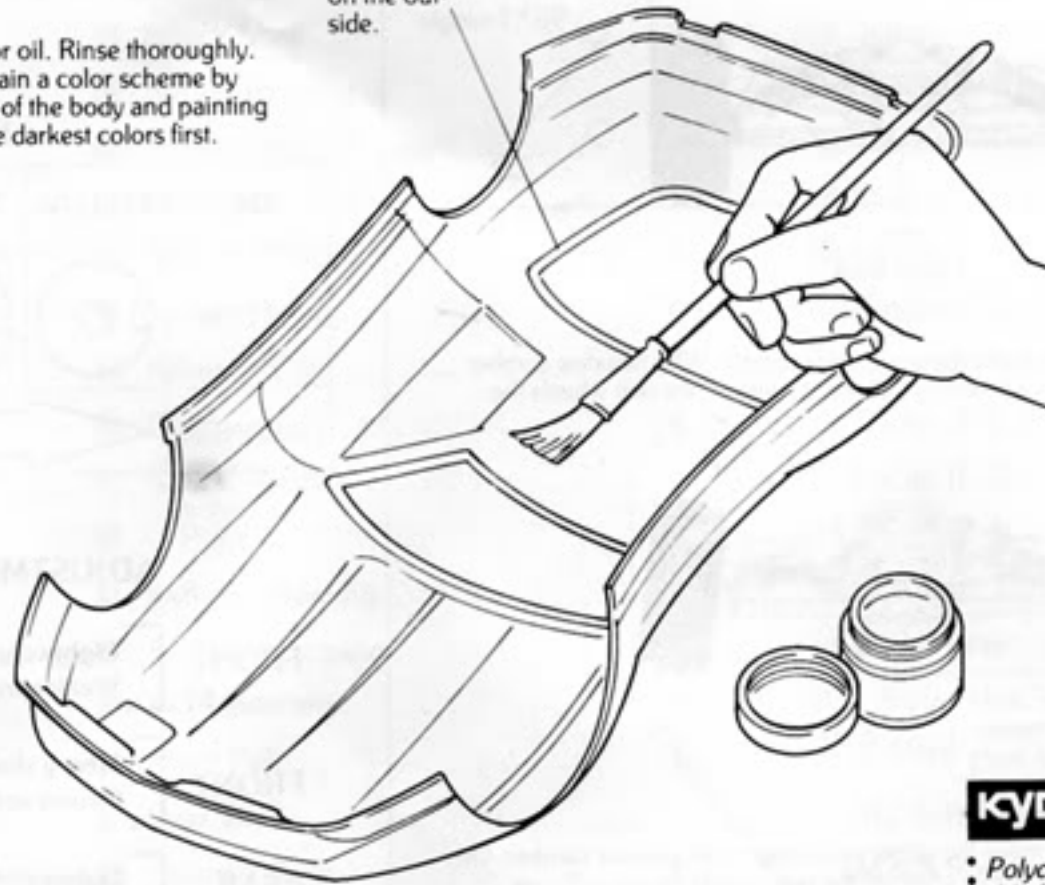


Body not included with kit.

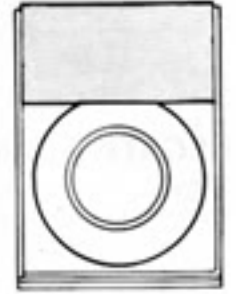
## 25 PAINTING

First, wash the body to remove any dirt or oil. 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. Paint the darkest colors first.

Use stripping tape around the windows on the outside.



Use stripping tape on the outside to create a color scheme.



**KYOSHO**

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

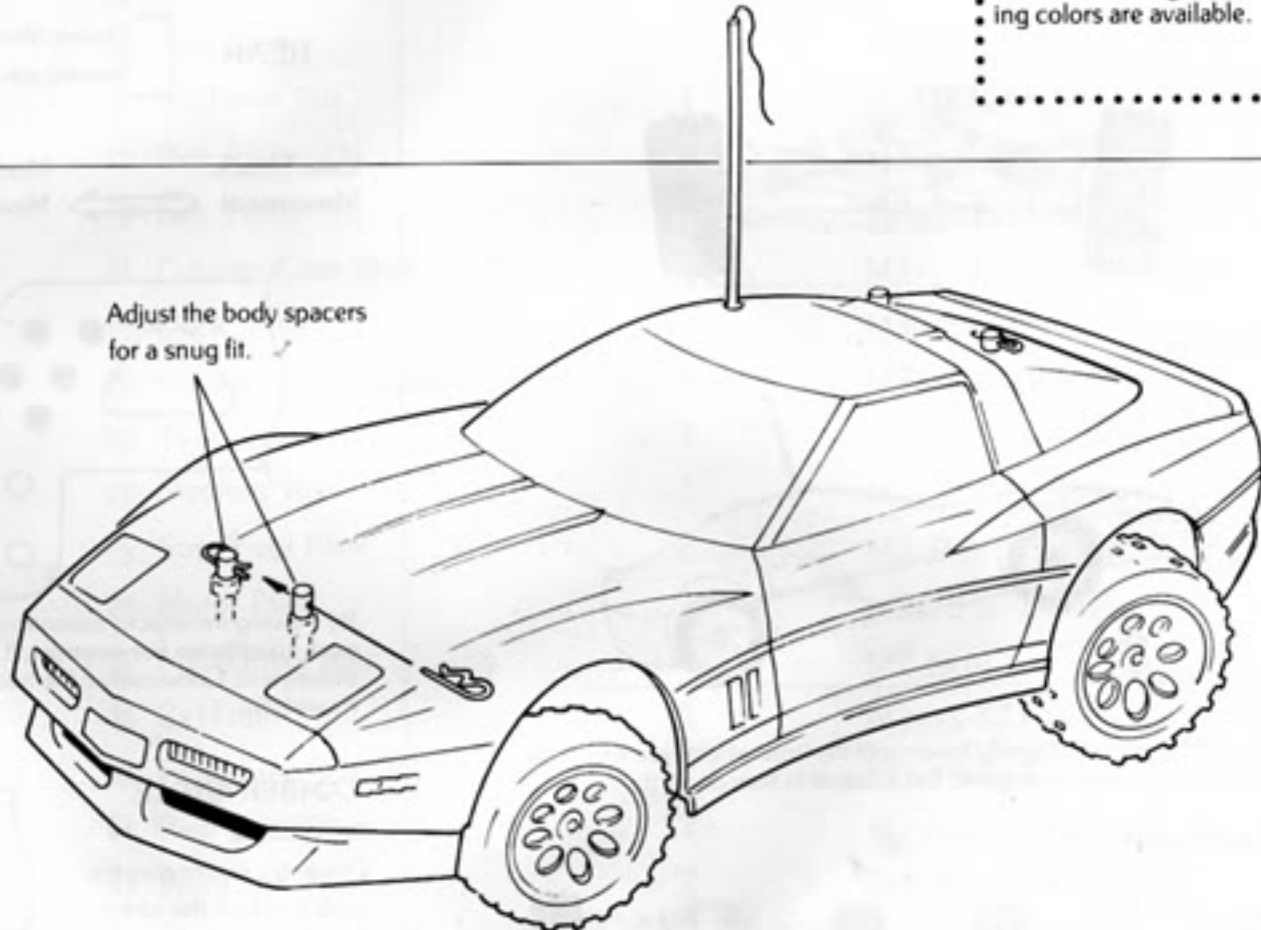


## 26 BODY MOUNTING

114 BODY PIN (4)



Adjust the body spacers for a snug fit.



### OPERATIONAL SAFETY

- 1) 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.
- 2) Check to make sure no one else is on your frequency. If so do not turn your radio on.
- 3) 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 wiring.
- 4) Do not grab the tires while they are rotating.
- 5) Remove the NiCd battery from the car when not in use.
- 6) Before connecting the NiCd battery, check that the speed control is in the neutral position.
- 7) 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.

### 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.

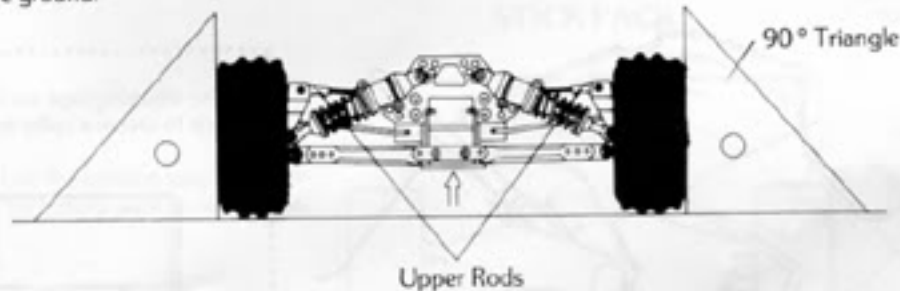
### OPERATING PROCEDURES

- 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.

# SLINGSHOT ADJUSTMENT AND MAINTENANCE GUIDE

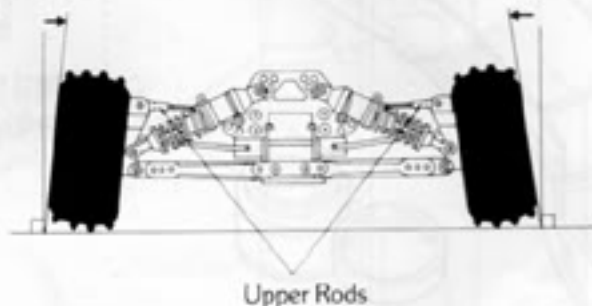
## CAMBER ADJUSTMENT

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.



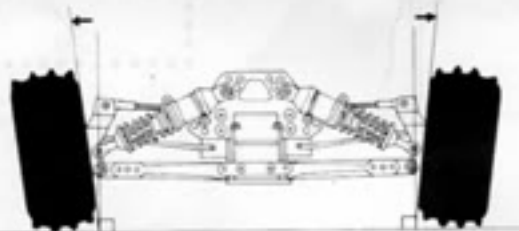
## NEGATIVE CAMBER

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.

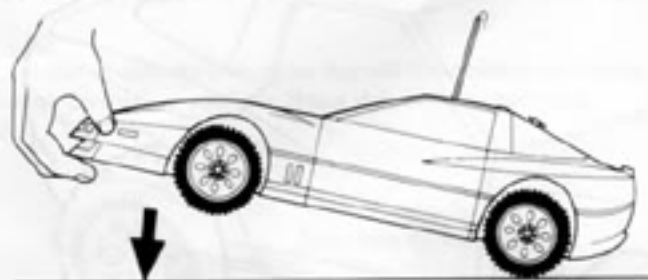


## POSITIVE CAMBER

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.

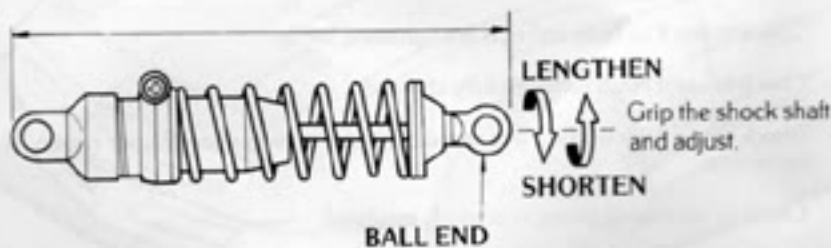
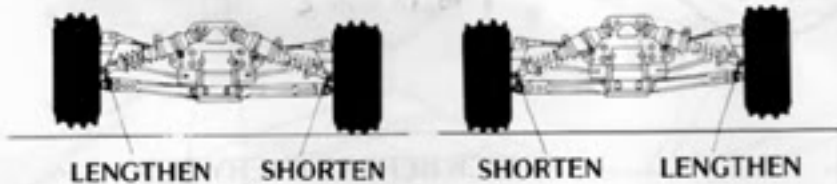


## SHOCK LENGTH



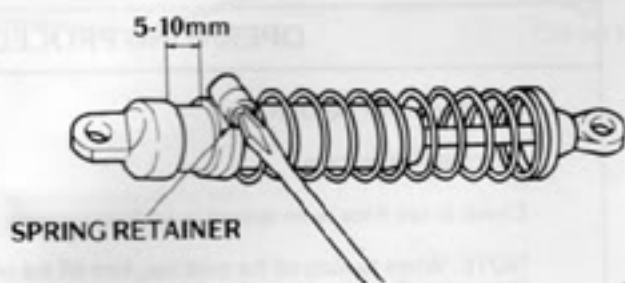
On a level surface, lift the front and gently lower until the front wheels just touch the surface. If they touch at the same time great, if not, adjust til they do.

Repeat this also for the rear.



## SPRING TENSION

Adjust the tension with a screw driver (see "adjustment of shocks" above right).



## SHOCK ADJUSTMENTS

By using different shock oils and different pistons, the dampening can be adjusted to different track conditions. Kyosho sells a shock oil assortment: stock number KYOC5681.

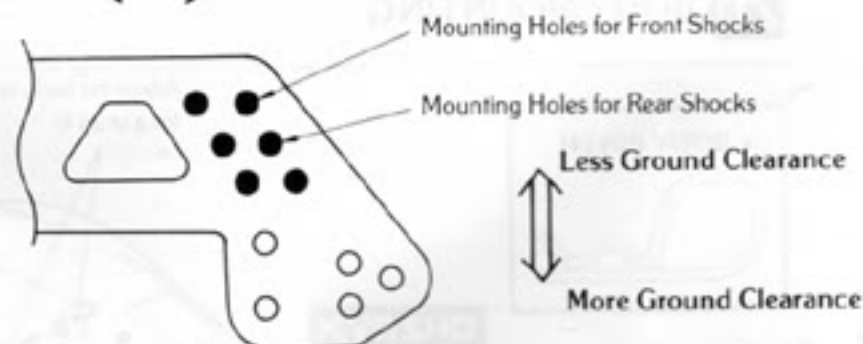
### DAMPENING HARDNESS

OIL	YELLOW	GREEN	YELLOW	RED	GREEN	RED
PISTON						
HARDNESS	← SOFTER →					

### 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

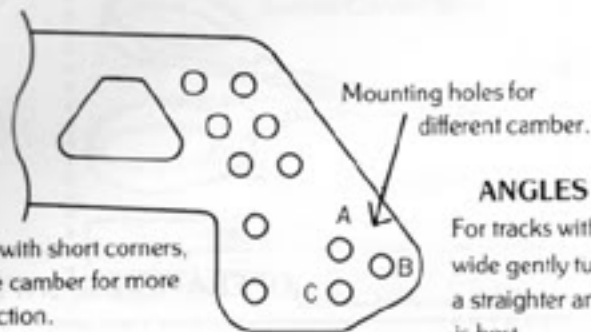
Less Shock Movement ↔ More Shock Movement



By moving the shocks mounting position, you can tune your suspension to suit the track conditions. For example, if the track is rough, allow for more clearance and more movement. Conversely if the track is smooth allow for less clearance and less movement.

## CAMBER ANGLE

This angle determines the angle in which the wheel deflects upon suspension movement.



For a track with short corners, allow more camber for more turning traction.

**ANGLES**  
For tracks with wide gently turns, a straighter angle is best.

**EFFECTS-**  
A: Straighter up and down.  
B: Slight camber angle.  
C: Larger camber angle.

## GEAR RATIOS

Pinion Gear	15	16	17	18	19	20	21	22	23	24	25
Gear Ratio	10.06	9.43	8.87	8.38	7.94	7.54	7.18	6.86	6.56	6.29	6.03
EFFECTS	<b>Smaller Pinion</b>					<b>Larger Pinion</b>					
	<ol style="list-style-type: none"> <li>1. More Torque</li> <li>2. Better Acceleration</li> <li>3. Lower Top End Speed</li> <li>4. Longer Run Times</li> </ol>					<ol style="list-style-type: none"> <li>1. Higher Speed</li> <li>2. Reduced Acceleration</li> <li>3. Less Torque</li> <li>4. Shorter Run Times</li> </ol>					

The above chart is a guide in choosing the best pinion gear for your motor. For example, if you have a high rim, low torque (less efficient) motor, choose a gear smaller than a 20 tooth to increase torque and especially run times. However if the motor you use is high torque, low RPM (high efficiency) motor, choose a gear higher than a 20 tooth to maximize its potential.

# PARTS LIST

Key No.	Part Name	Qty	Key No.	Part Name	Qty	Key No.	Part Name	Qty
①	Chassis . . . . .	1	③①	Shock Spring . . . . .	4	⑩①	Silicone Grease . . . . .	1
②	Bumper . . . . .	1	③②	Spring Holder . . . . .	4	⑩②	Double Sided Tape . . . . .	1
③	Upper Deck . . . . .	1	③③	Shock Shaft . . . . .	4	⑩③	Screw Locking Compound . . . . .	1
④	Shock Tower . . . . .	2	③④	Spring Retainer . . . . .	4	⑩④	Shock Oil . . . . .	1
⑤	Top Bulk Head . . . . .	2	③⑤	Shock Case . . . . .	4	⑩⑤	4-Way Wrench . . . . .	1
⑥	Lower Bulk Head . . . . .	2	③⑥	Shock Ball End . . . . .	4	⑩⑥	Straps (SM) . . . . .	2
⑦	Rear Sus. Spacer . . . . .	2	③⑦	Spacer (Thick) . . . . .	4	⑩⑦	Decals . . . . .	1
⑧	Tensioner . . . . .	1	③⑧	Spacer (Thin) . . . . .	4	⑩⑧	Binding Tape . . . . .	1
⑨	Belt Guide (A) . . . . .	1	③⑨	Retainer Clip . . . . .	4	⑩⑨	Antenna Tube . . . . .	1
⑩	Belt Guide (B) . . . . .	1	③⑩	Diaphragm . . . . .	4	⑩⑩	E-Clip (E-2.5) . . . . .	20
⑪	Belt Guide (C) . . . . .	1	③⑪	Shock Pistons . . . . .	4	⑩⑪	E-Clip (E-3) . . . . .	4
⑫	Belt Guide (D) . . . . .	1	③⑫	O-Ring . . . . .	8	⑩⑫	E-Clip (E-4) . . . . .	2
⑬	Belt Pulley (A) . . . . .	1	③⑬	4x8mm Bearing . . . . .	2	⑩⑬	2x10mm Threaded Rod . . . . .	1
⑭	Belt Pulley (B) . . . . .	1	③⑭	5x10mm Bearing . . . . .	9	⑩⑭	Body Pins . . . . .	4
⑮	Pulley Spacer . . . . .	1	③⑮	8x14 Bearing . . . . .	4	⑩⑮	1.5mm Hex Wrench . . . . .	1
⑯	Body Mount . . . . .	4	③⑯	Front Belt . . . . .	1	⑩⑯	2.5mm Hex Wrench . . . . .	1
⑰	Body Spacer . . . . .	4	③⑰	Rear Belt . . . . .	1		M2.6x6 Screw . . . . .	1
⑱	Instruction Manual . . . . .	1	③⑱	Counter Gear . . . . .	1		M3x8 Screw . . . . .	11
⑲	Shaft Mount (R) . . . . .	1	③⑲	One-Way Diff. . . . .	1		M3x12 Screw . . . . .	6
⑳	Shaft Mount (L) . . . . .	1	③㉑	Axle Shaft . . . . .	1		M4x12 Screw . . . . .	4
㉑	Mounting Plate . . . . .	1	③㉒	3x20mm Pin . . . . .	1		M3x18 Screw . . . . .	4
㉒	Right Knuckle Arm . . . . .	1	③㉓	Belt Pulley (A) . . . . .	1		M3x6 F/H, S/T Screw . . . . .	5
㉓	Left Knuckle Arm . . . . .	1	③㉔	Belt Pulley (B) . . . . .	1		M3x10 F/H, S/T Screw . . . . .	2
㉔	Front Sus. Arm . . . . .	2	③㉕	Counter Gear Shaft . . . . .	1		M3x12 F/H, S/T Screw . . . . .	6
㉕	Rear Sus. Arm . . . . .	2	③㉖	Deck Post . . . . .	2		M3x15 F/H, S/T Screw . . . . .	2
㉖	Front Hub (R) . . . . .	1	③㉗	Counter Gear Guide . . . . .	1		M3x14 F/H, S/T Screw . . . . .	4
㉗	Front Hub (L) . . . . .	1	③㉘	Tensioner Spring . . . . .	1		M3x10 S/T Screw . . . . .	16
㉘	Rear Hub (R) . . . . .	1	③㉙	Steering Rod . . . . .	1		M3x12 S/T Screw . . . . .	2
㉙	Rear Hub (L) . . . . .	1	③㉚	Sus. Pivot Plate . . . . .	2		M2x8 S/T Screw . . . . .	16
⑳	Bail End (LG) . . . . .	16	③㉛	Motor Plate . . . . .	1		M2x10 S/T Screw . . . . .	4
㉛	Servo Saver (A) . . . . .	1	③㉜	M2.6 Pivot Ball . . . . .	4		M2.6x10 S/T Screw . . . . .	4
㉜	Servo Saver (B) . . . . .	1	③㉝	2x11mm Pin . . . . .	1		M3x15 S/T Screw . . . . .	4
㉝	Servo Saver (C) . . . . .	1	③㉞	Front Sus. Shaft (A) . . . . .	2		M3x18 S/T Screw . . . . .	4
㉞	Servo Saver (D) . . . . .	1	③㉟	Rear Sus. Shaft (A) . . . . .	2		M2.6x6 S/T Screw . . . . .	1
㉟	Servo Saver Spacers . . . . .	2	③㊱	Front Sus. Shaft (B) . . . . .	2		M3x10 S/T Screw . . . . .	8
㊱	Servo Mount . . . . .	4	③㊲	Rear Sus. Shaft (B) . . . . .	2		M2.6 Nut . . . . .	2
㊲	Servo Mount Spacer . . . . .	1	③㊳	Upper Rod . . . . .	4		M3 Nut . . . . .	15
㊳	Antenna Mount . . . . .	1	③㊴	Tie Rod . . . . .	2		M4 Nut . . . . .	4
㊴	Shock Bushing . . . . .	4	③㊵	Servo Saver Post . . . . .	2		M2.6 Washer . . . . .	4
㊵	M3 Plastic Nut . . . . .	6	③㊶	Swing Shaft . . . . .	4		M3 Washer . . . . .	6
㊶	Ball End (Small) . . . . .	3	③㊷	M5.8 Ball . . . . .	8		M4 Washer . . . . .	4
㊷	Front Rim (A) . . . . .	2	③㊸	Ball Nut . . . . .	3		M5 Washer . . . . .	4
㊸	Inner Rim (Narrow) . . . . .	2	③㊹	M3 Pivot Ball . . . . .	4		M3x3 Set Screw . . . . .	5
㊹	Front Rim (B) . . . . .	2	③㊺	King Pin . . . . .	4		M4x4 Set Screw . . . . .	4
㊺	Rear Rim (A) . . . . .	2	③㊻	Drive Washer . . . . .	4			
㊻	Inner Rim (Wide) . . . . .	2	③㊼	Front Wheel Shaft . . . . .	2			
㊼	Rear Rim (B) . . . . .	2	③㊽	Rear Wheel Shaft . . . . .	2			
㊽	Front Tire (Narrow) . . . . .	2	③㊾	Joint . . . . .	4			
㊾	Rear Tire (Wide) . . . . .	2	③㊿	Saver Spring . . . . .	1			
㊿	Shock Cap . . . . .	4	④①	Pinion Gear (20T) . . . . .	1			

## 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 27 for complete list) are usually not available singularly, but we offer these 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 parts pack guide below. When referring to the parts you need, always use the **Parts Pack Number**. For instance, if you need a Front Hub (Key #1 ask you dealer for Kyosho Pack OR-01 (Chassis).

STOCK #	PART #	DESCRIPTION	CONTENTS
KYOC2891	OR-01	Chassis	① × 1
KYOC2661	OR-02	Bumper	② × 1
KYOC4914	OR-03	Radio Plate	③ × 1
KYOC5695	OR-04	Shock Stay	④ × 1
KYOC4946	OR-05	Rear Axle Mount	⑤⑥⑦ × 1
KYOC4861	OR-06	Pulley Set	⑧⑨⑩⑪⑫⑬⑭⑮ × 1 ⑯ × 1
KYOC2554	OR-07	Body Mount Set	⑰⑱ × 2
KYOC2796	OR-08	Center Axle Mount	⑲⑳㉑ × 1
KYOC2294	OR-09	Belt (Long)	㉒ × 1
KYOC2293	OR-10	Belt (Short)	㉓ × 1
KYOC4696	OR-11	One-Way Assembly	㉔ × 1
KYOC4944	OR-12	Rear Axle Shaft	㉕㉖ × 1
KYOC2800	OR-13	Center Axle Shaft	㉗㉘ × 1
KYOC4913	OR-14	Radio Plate Post	㉙ × 2
KYOC2797	OR-15	Center Axle Hub	㉚ × 1
KYOC4466	OR-16	Linkage Set	㉛ × 1
KYOC4852	OR-17	Plate Set	㉜, ㉝ × 1
KYOC4872	OR-18	Pulley Main	㉞㉟ × 1
KYOC3263	OR-19	Decals	㊱ × 1
KYOC5518	OR-20	Screw Set	
KYOC4362	OT-004	King Pin	㊲ × 4
KYOC4322	OT-005	Joint	㊳ × 2
KYOC6122	OT-006	Swing Shafts	㊴ × 2
KYOC4367	OT-016	Knuckle Arms	㊵㊶ × 1
KYOC5657	OT-017	Shaft (FR)	㊷ × 2
KYOC5658	OT-018	Shafts (Rear)	㊸ × 2
KYOC3332	OT-019	Drive Washer	㊹ × 4
KYOC4823	OT-031	3mm Pivot Ball	㊺ × 10
KYOC2167	OT-032	5.8mm Ball	㊻ × 10
KYOC2242	OT-033	Ball Recpt. 2.6mm	㊼ × 10
KYOC6292	OT-035	Upper Rod Set	㊽⑸ × 4 ㊾ × 8 ㊿ × 1
KYOC4822	OT-036	Pivot Ball 2.6mm	① × 10
KYOC4232	OT-045	Hub Rear	②③ × 1
KYOC4238	OT-055	Hub Set Front	④⑤ × 1
KYOC6071	OT-069	Sus. Arm Set	⑥⑦ × 2
KYOC5898	OT-085	Spur Gear	⑧ × 1
KYOC6076	OT-097	Sus. Shaft Set	⑨⑩⑪⑫ × 2
KYOC5637	OT-120	Servo Saver Set	⑬ × 2
KYOC5653	UM-14	Servo Saver	⑭⑮⑯⑰ × 1 ⑱ × 2 ⑲⑳㉑ × 4 ㉒ × 5
KYOC5636	UM-43	Servo Saver Ring	㉓ × 2
KYOC6025	EF-037	Straps (small)	㉔ × 6
KYOC4190	EF-102	Glass Tape	㉕ 50m Roll
KYOC2055	SD-79	Antenna Tube	㉖ × 5
KYOC5692	W-5001	Gold Shocks (short)	㉗㉘㉙㉚㉛㉜㉝㉞ ㉟ × 2 ①②③ × 4
KYOC6337	W-5021	Wheels (Wide)	④⑤⑥ × 2
KYOC6380	W-5022	Wheels (Narrow)	⑦⑧⑨ × 2

STOCK #	PART #	DESCRIPTION	CONTENTS
KYOC6236	W-5031	Tires (Wide, Block)	⑩ × 2
KYOC6258	W-5034	Tires (Narrow, Block)	⑪ × 2
KYOC2197	1901	5x10mm Bearing	⑫ × 2
KYOC2207	1903	4x8mm Bearing	⑬ × 2
KYOC2217	1911	8x14 Bearing	⑭ × 2
KYOC5681	1951	Shock Oil Set	(L-M-H)
KYOC6141	1840	Double Sided Tape	⑮ × 1
KYOC2517	1889	Body Pins	⑯ × 5
KYOC3395	CB-072	E-Ring (E-3)	⑰ × 4
KYOC3392	OT-039	E-Ring (E2.5)	⑱ × 10
KYOC3400	KC-20	E-Ring (E-4)	⑲ × 4
KYOC6222	SC-089	Tie Rod Set	㉑ × 2, ㉒⑳ × 4

### OPTIONAL PARTS

Consult your dealer for listings	W-5085 through W-5095	Hard Pinion Gears	15T-25T Pinions
KYOC5388	W-5005	Rod Set	Adjustable
KYOC2174	W-0107	Ball Diff.	Front
KYOC2175	W-0108	Ball Diff.	Rear
KYOC5703	W-5003	Platinum Shocks	
KYOC4237	OT-047	Hub Set (Front)	Special Caster Angle
KYOG6700	LM-15	Motor Heatsink	For cooling and filtering
KYOC3173	1863	Sponsor Decals	
KYOC5736	1953	Silicone Oil	Soft
KYOC5737	1954	Silicone Oil	Medium
KYOC5738	1955	Silicone Oil	Hard
KYOC5574	OT-131	Shim Set	
KYOC6127	W-5061	Swing Shaft-Uni.	Universal Type
KYOC6353	OT-067	Chrome Wheels	Wide
KYOC6346	OT-090	White Wheels	Wide (Mid Style)
KYOC6321	FD-02	White Wheels	Wide (RS Ford Style)
KYOC6347	MA-17	White Wheels	Wide (Maxxum-Style)
KYOC5336	RM-15	Chrome Wheels	Wide (ZR-1 Style)
KYOC6312	W-5023	Yellow Wheels	Wide (Rampage Style)
KYOC6246	OT-056	Low Pro. Tires	Spiked
KYOC6237	W-5032	Low Pro. Tires	Spiked-Soft
KYOC6227	W-5077	Low Pro. Tires	Pin Spikes
KYOC6228	W-5078	Low Pro. Tires	Block
KYOC6248	RK-15	Low Pro. Tires	Large Block
KYOC6232	1872	Sponge Tires	
KYOC6249	SB-14	Low Pro. Tires	Large Spikes
KYOC6242	W-5053	Radial Style Tires	(RS Ford Style)
KYOC6257	W-5033	Narrow Tires	Pin Spikes
KYOC6226	W-5076	Narrow Tires	Multi Spiked
KYOC6225	W-5075	Narrow Tires	Pin Spikes
KYOC6390	1942	Wrench Set	4-way and Hex Wrenches

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