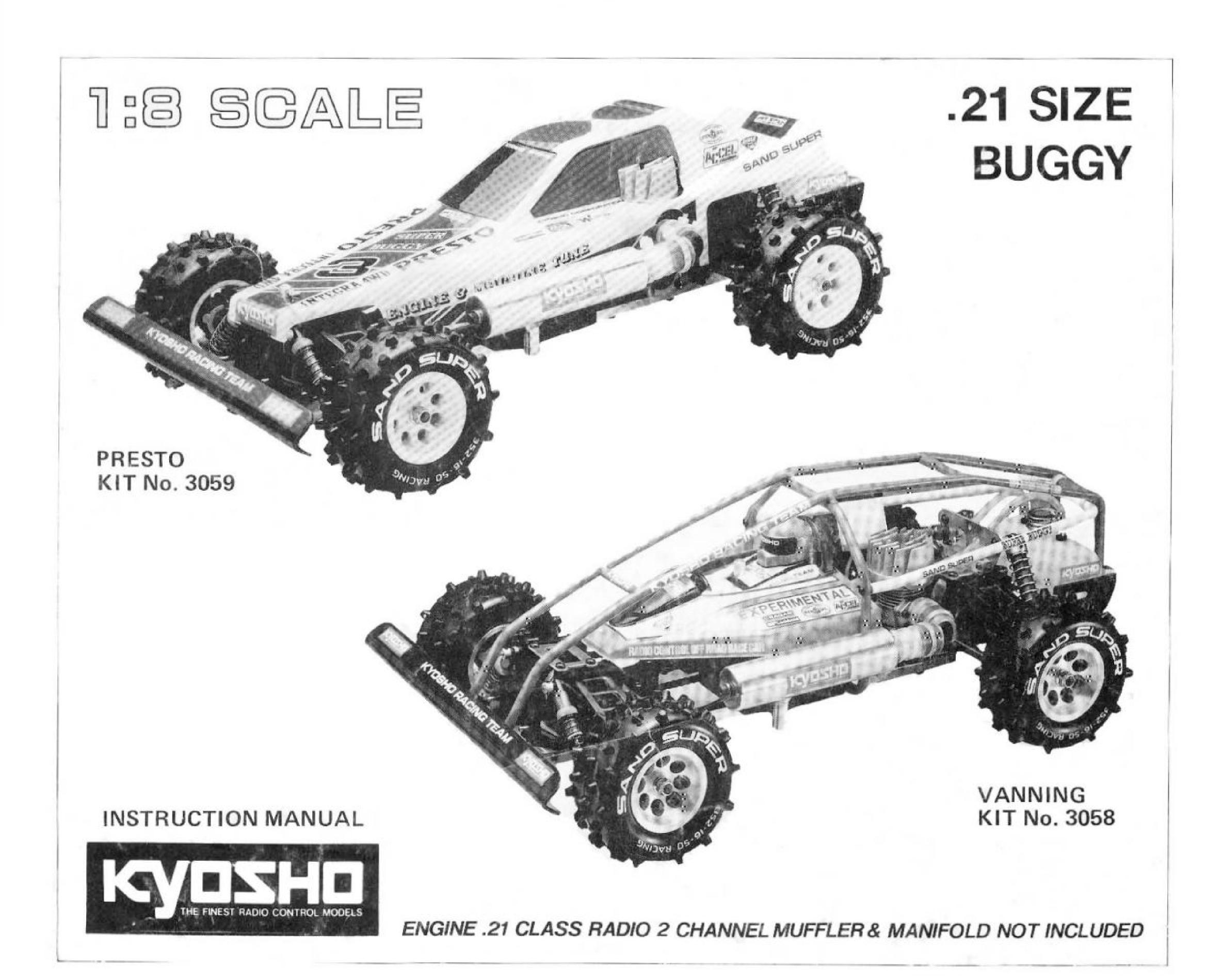
# INTEGRA 4WD VANWG\*PRESTO

# RADIO CONTROLLED OFFROAD RACING BUGGY KIT

- Sophisticated double-wishbone independent suspension on all four wheels with four-wheel drive for maximum traction
- ■Race-proven square-section 17S aluminum alloy ladder frame is strong and light. Accurate alignment of all components is assured.
- Coil springs with special oversize oil-filled shock absorbers for top handling on even the roughest tracks.
- Front suspension has compound caster upper wishbone angle plus kingpin angle for top directional stability after jumps.
- •Mid-ship engine position balances buggy perfectly, minimizes inertia for quick maneuverability, and optimizes weight transfer for acceleration.
- Special lightweight three-piece wheels, custom fuel tank, heavy-duty servo saver and special high-grip knobby tires are included.



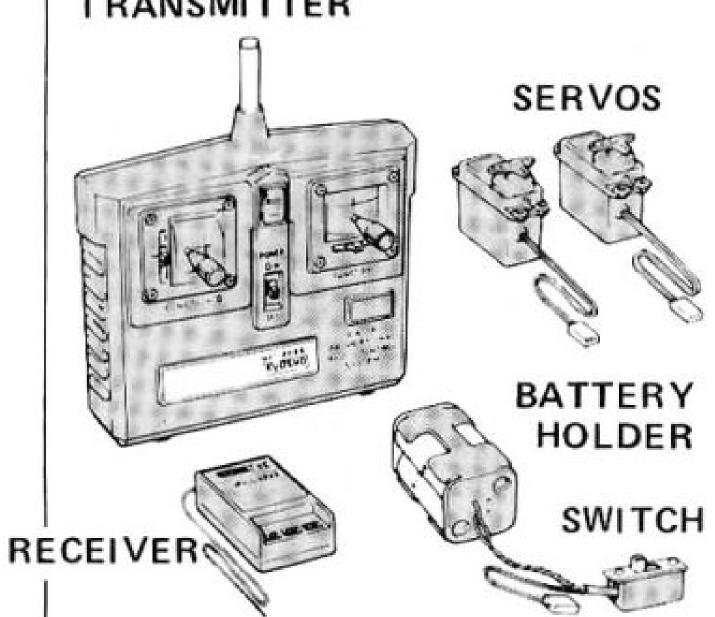
# THINGS YOU WILL NEED BESIDES THIS KIT

# MANUG\*PRES

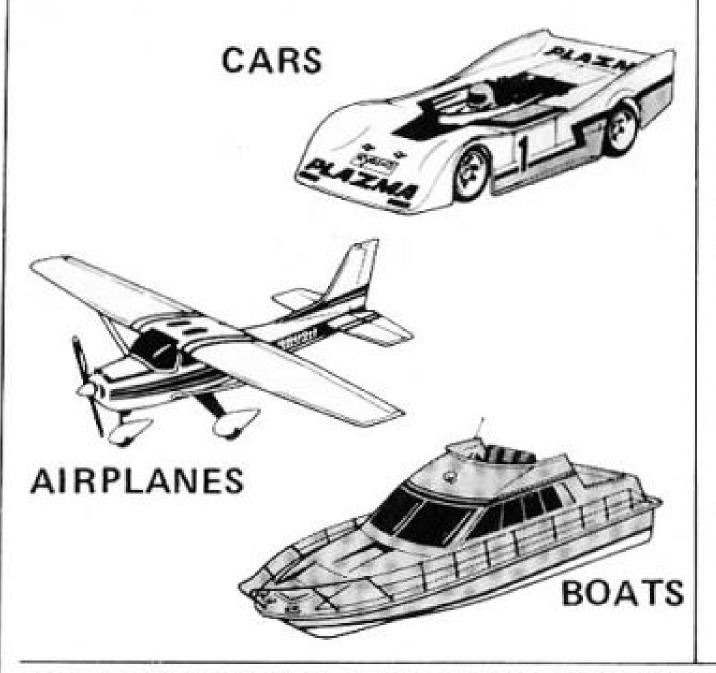
#### 2 CHANNEL RADIO SYSTEM

A two channel, 2 servo radio control system is required for running this kit. The various components are pictured below.

#### TRANSMITTER



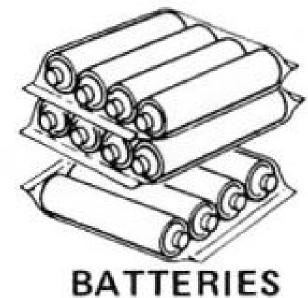
This type of radio system can also be used for other models requiring only two channels of control.

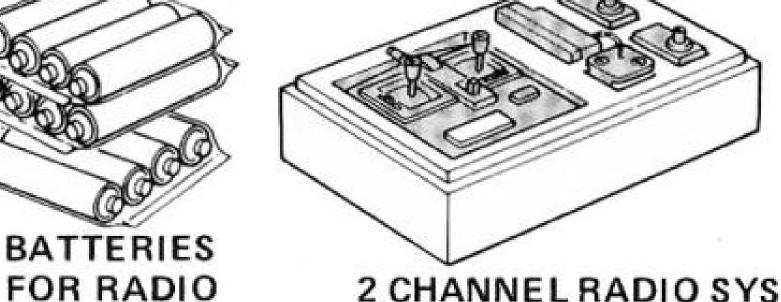


#### CHECK YOUR RADIO SYSTEM

Follow the instructions that came with your radio system to check out its operation.

You will also need to supply your radio with the proper number of batteries (usually 7 or 8 in the transmitter and 4 for the receiver.)



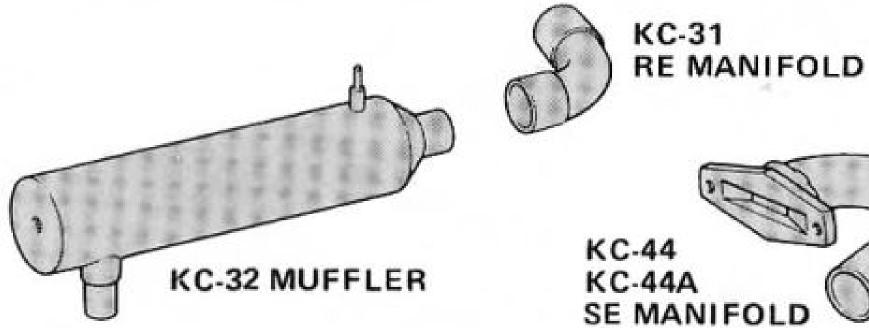


2 CHANNEL RADIO SYSTEM

#### ENGINE AND EXHAUST SYSTEM

The OS Max 21VF-B, 21VF-C, 21FSR-C, 21FSR-B, Enya 21CX BUGGY and Irvine 20 or 25 CAR engines will mount with little or no modifications. Others will require either additional parts not listed here or more than slight modifications. If you are planning to use an aircraft type engine you MUST supply it with a heat sink device to help cool the engine. Without a heatsink, the engine will overheat and be destroyed.

You will need to purchase a muffler and manifold. The Kyosho KC-32 Muffler is recommended and will work those engines listed above. You must choose the proper manifold based upon the engine you are using. For the OS 21VF-B and VF-C use the KC-31 Manifold. For OS and Enya side exhaust models, use the KC-44 Manifold and for Irvine engines use the KC-44A Manifold. See page 15 for more details on these items.



## REQUIRED TOOLS

These ARE included with the kit:

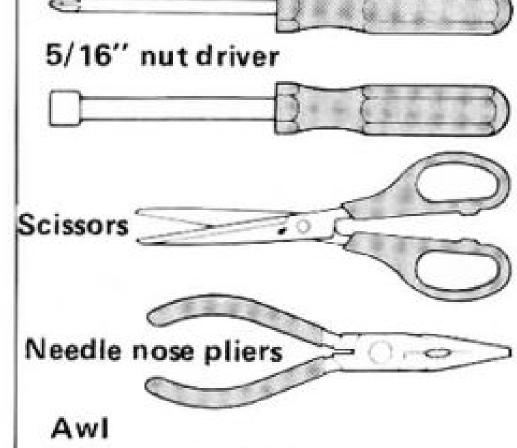
1.5mm allen wrench

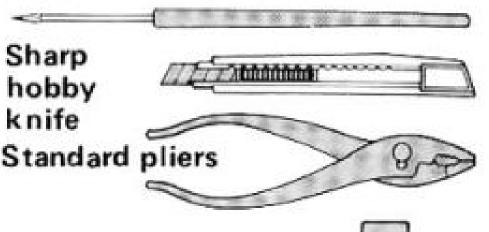
2mm allen wrench

3mm allen wrench

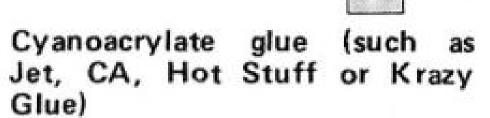
These ARE NOT included with the kit:

Phillips screwdriver



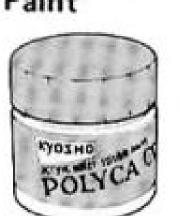


Four-way Wrench





Polyurethane Paint

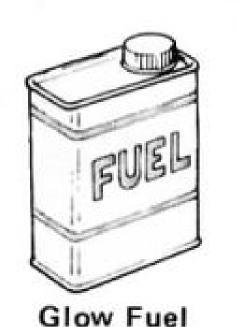




Masking tape

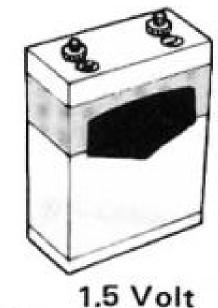
Paint Brush

# ITEMS YOU WILL NEED FOR RUNNING

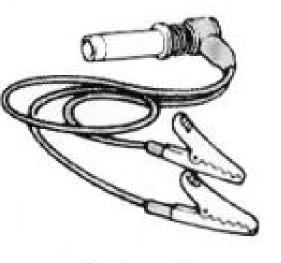


Fuel Bulb



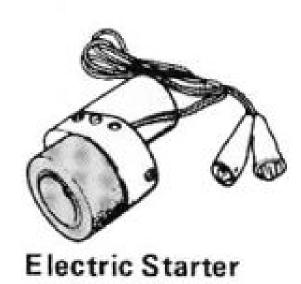


**Glow Plug Battery** 



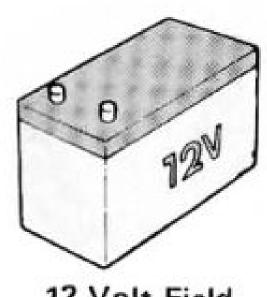
Glow Plug

Connector



w/hard foam

"Do-Nut"



12 Volt Field Battery

# IMPORTANT! BEFORE YOU BEGIN

A WORD OF WARNING is necessary, especially if this happens to be your first gas-powered vehicle. Gas-powered cars are subjected to stress and strain due to high engine RPM, rough terrain and the racing/high performance usage that they receive. As a result, they need continual preventative maintenance to keep them in operating condition.

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 CIRCUM-STANCES 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.

### METRIC NUTS AND BOLTS

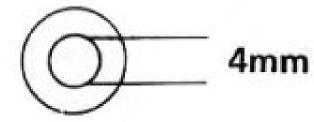
All nuts and bolts used throughout this kit are metric size. Therefore, some of the notations may not be familiar to you. An M3 nut is a 3 millimeter (3mm) nut. An M3 x 15 screw is 15 mm long and 3mm in diameter. Some round parts may be labeled as a "4.0 Washer" (this would be a washer with a 4mm inside diameter) or a "3 Ø 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

3<sub>mm</sub>

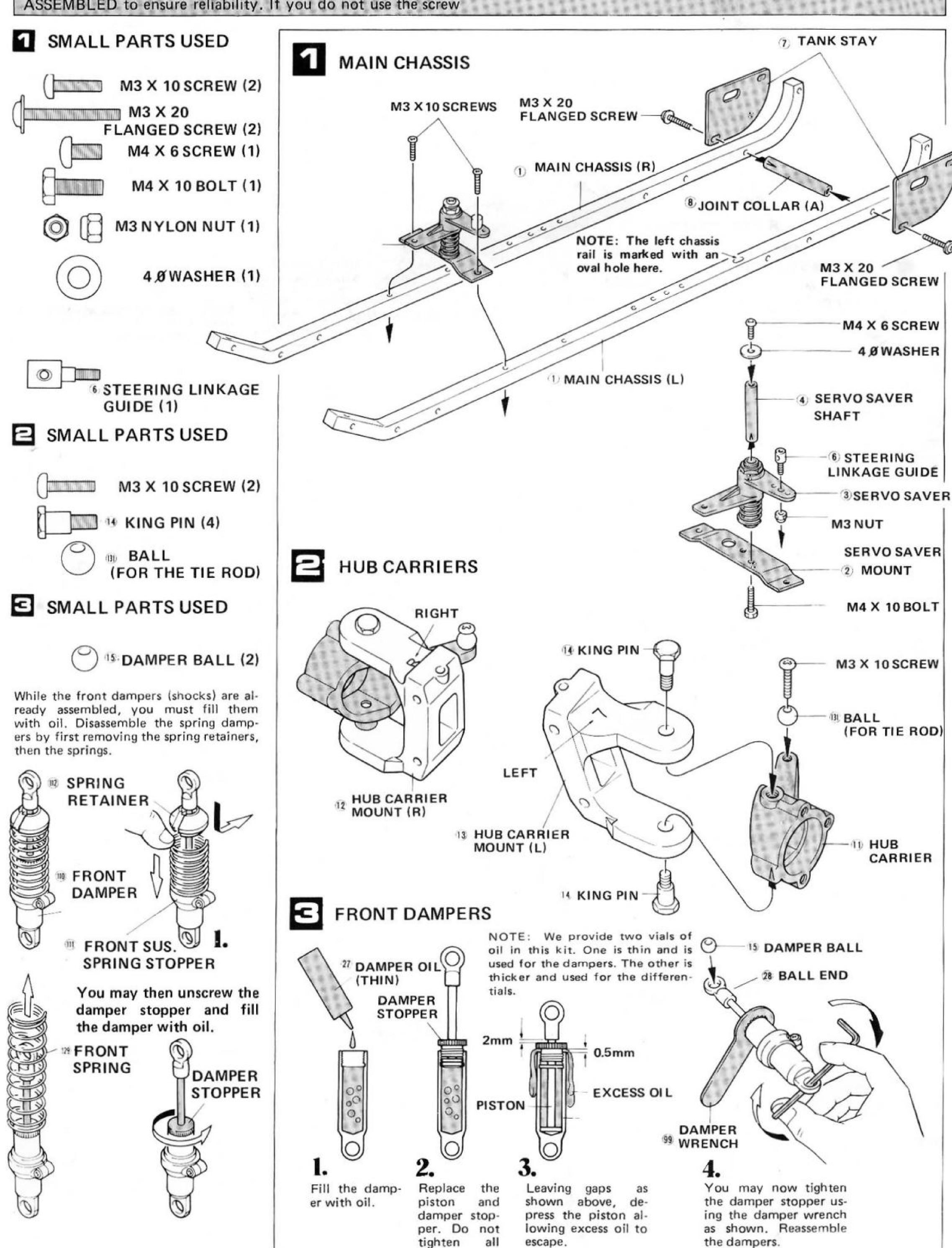
15mm

4 Ø WASHER

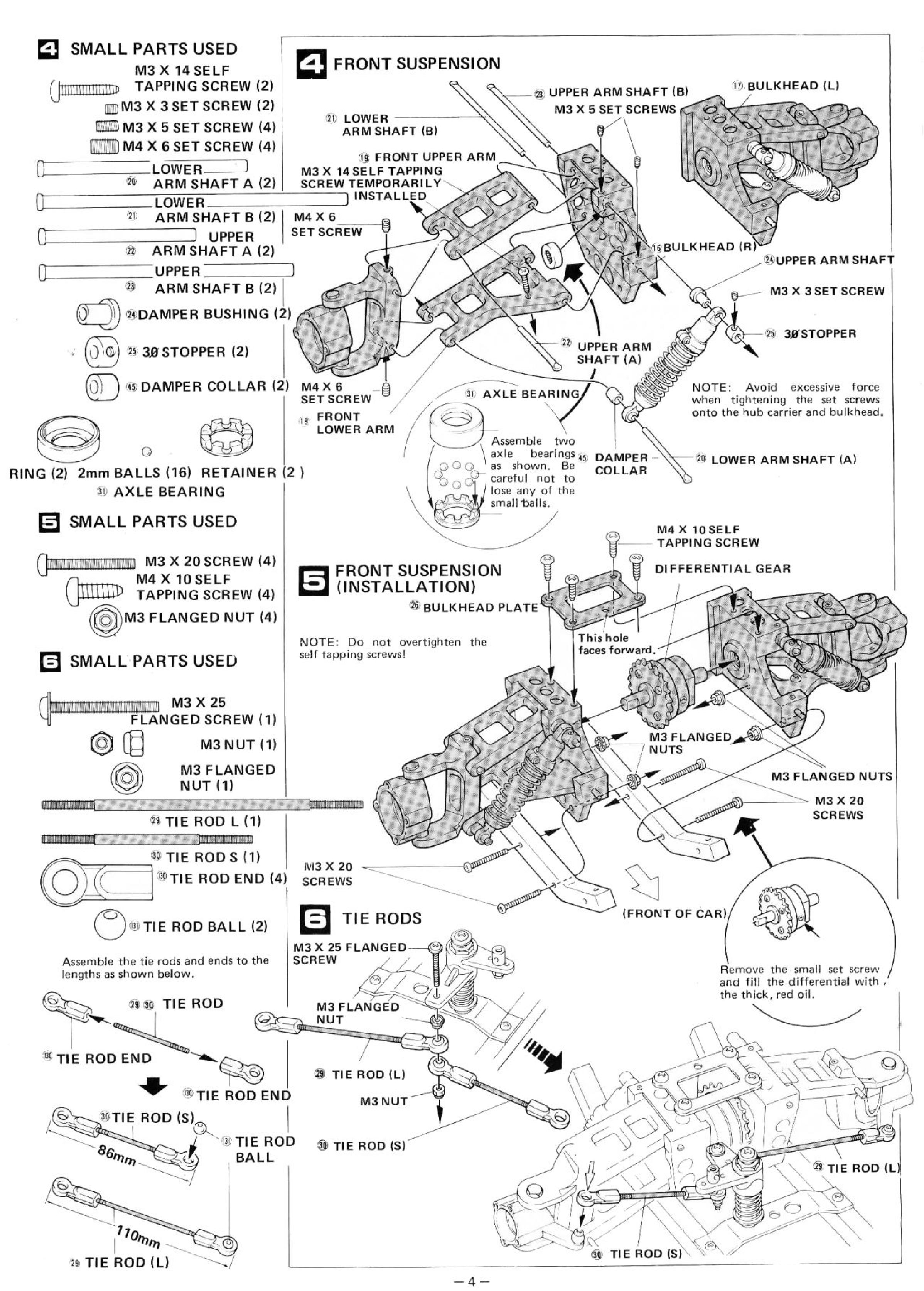


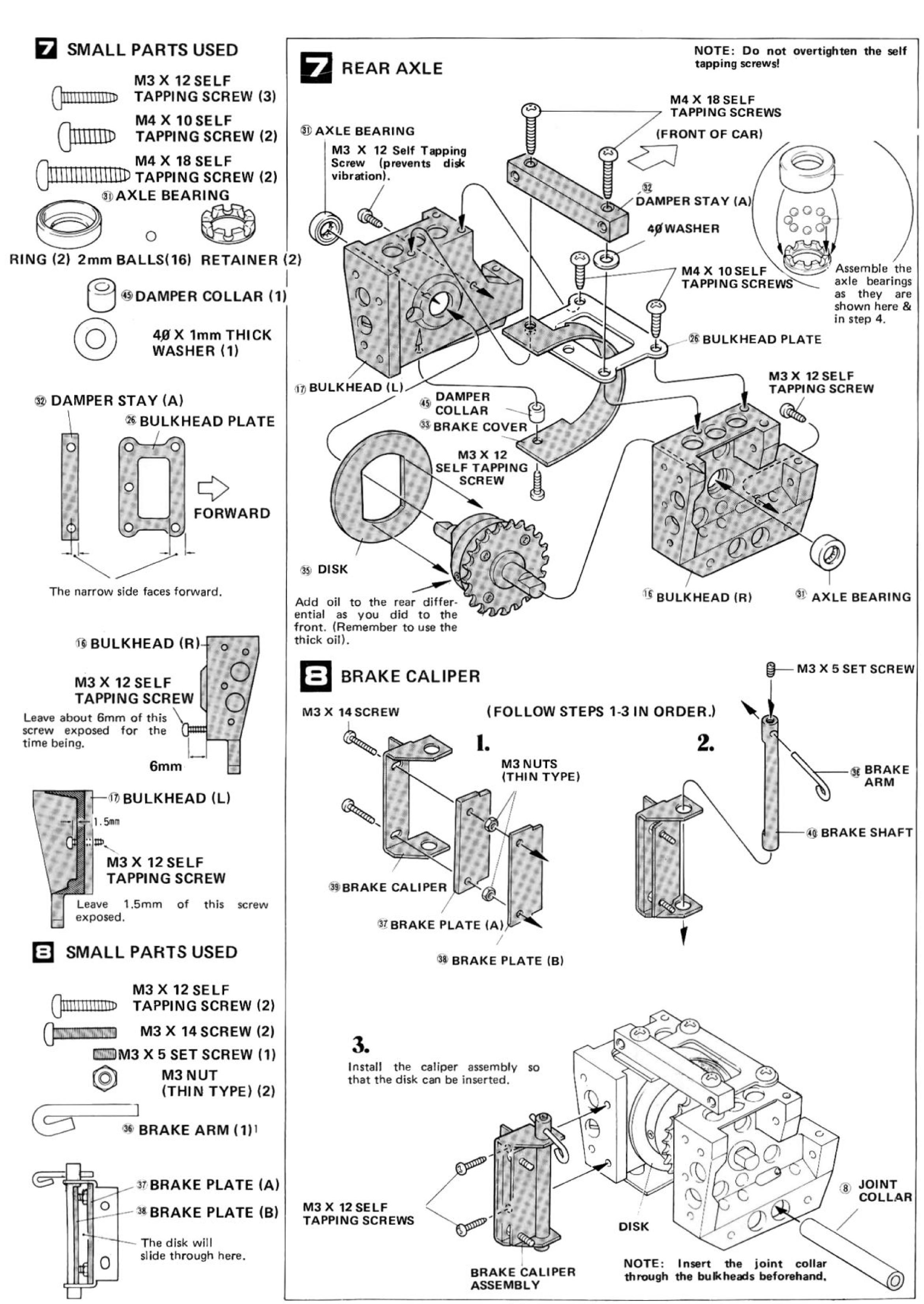
In addition to the damper oil and differential oil (red liquids) you will also find a small tube labeled "screw cement". This bluish-green locking compound should be used on all NUTS AND BOLTS in the car including those parts which are ALREADY ASSEMBLED to ensure reliability. If you do not use the screw

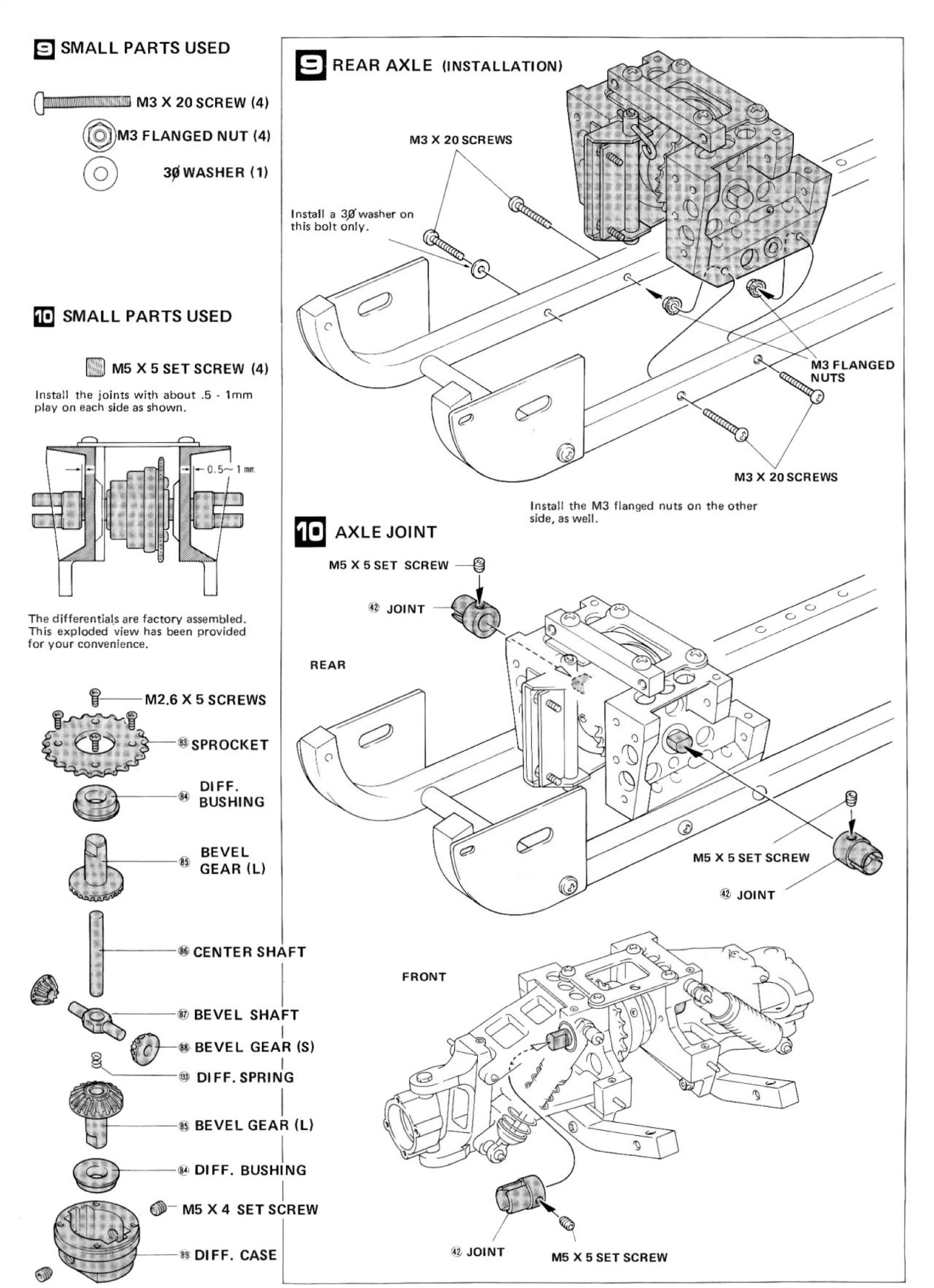
cement, all the nuts and bolts of the car WILL eventually fall out. Use this type of cement only on the nuts and bolts. When it calls for cement in the manual, use an "instant" type of glue such as Jet, CA or Hot Stuff.

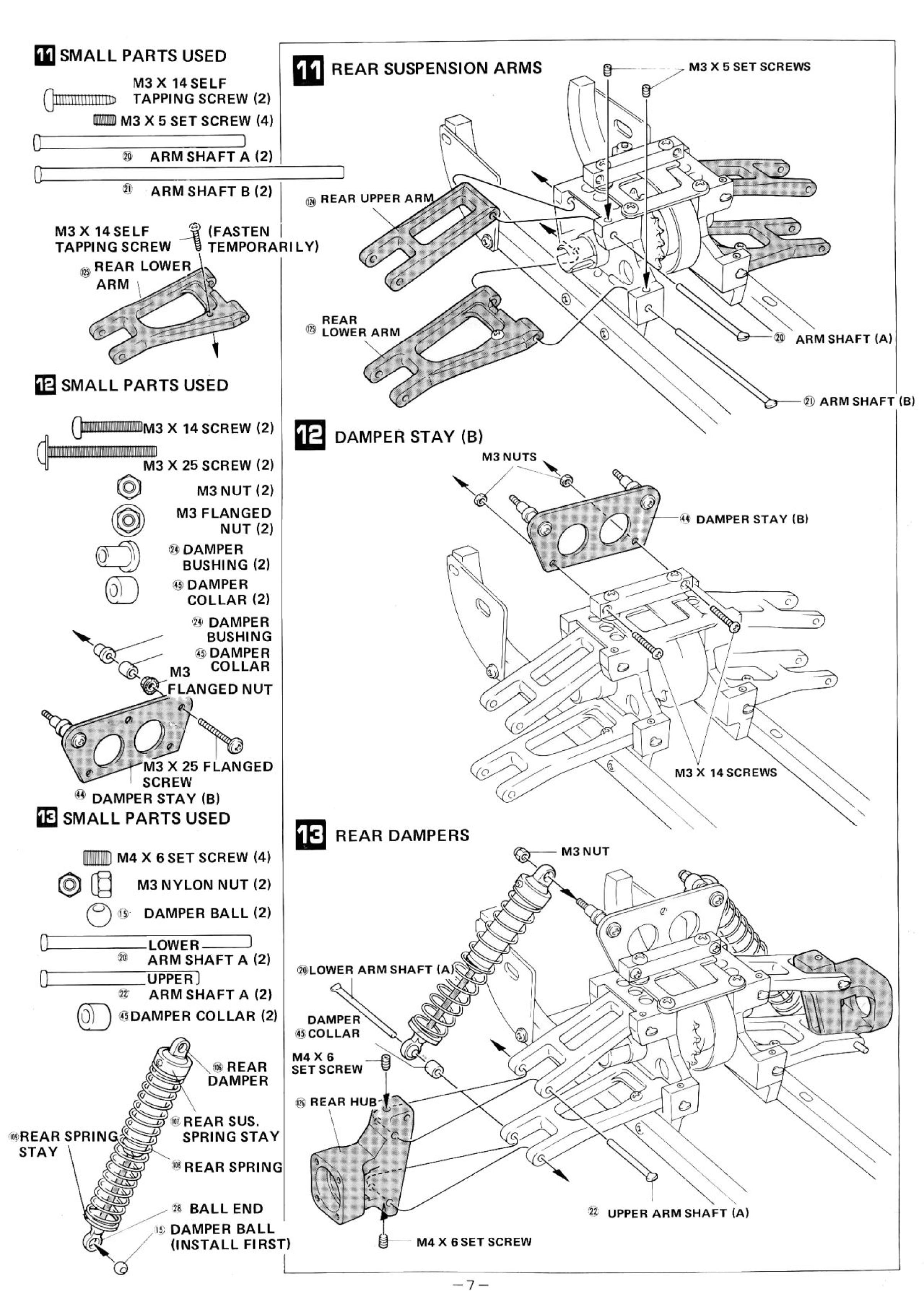


the way.









# MALL PARTS USED

M3 X 8 SELF TAPPING SCREW (8)



M3 X 5 SCREW (8)



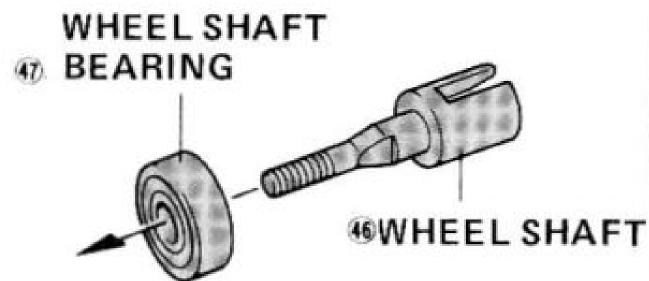


3Ø WASHER (8)

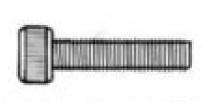


⑤ COLLAR (2)

Place the four wheel shaft bearings onto the four wheel shafts as shown.



# **SMALL PARTS USED**



M3 X 12 CAP SCREW (2)



M3 X 30 SCREW (1)



M5 NUT

5Ø WASHER (3)

M3 X 5 SCREW

WHEEL SHAFT

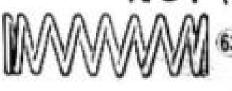
46 WHEEL SHAFT

BEARING

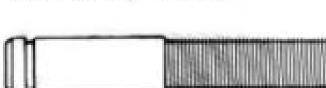


M5 FLANGED **NUT (1)** 

60 WASHER (3)



MAN ADJUST SPRING (1)



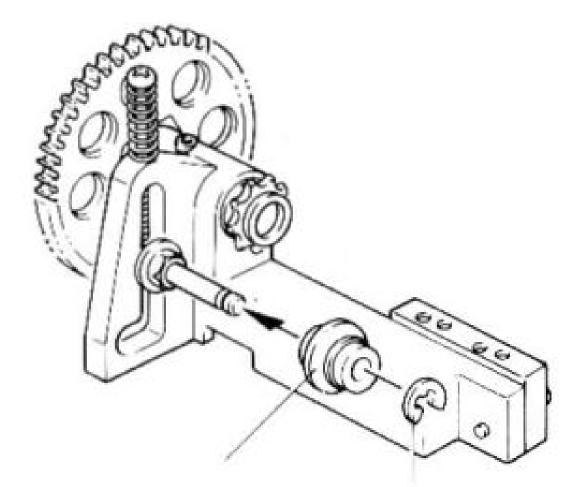
66 TENSIONER SHAFT (1)



TENSIONER GUIDE (1)

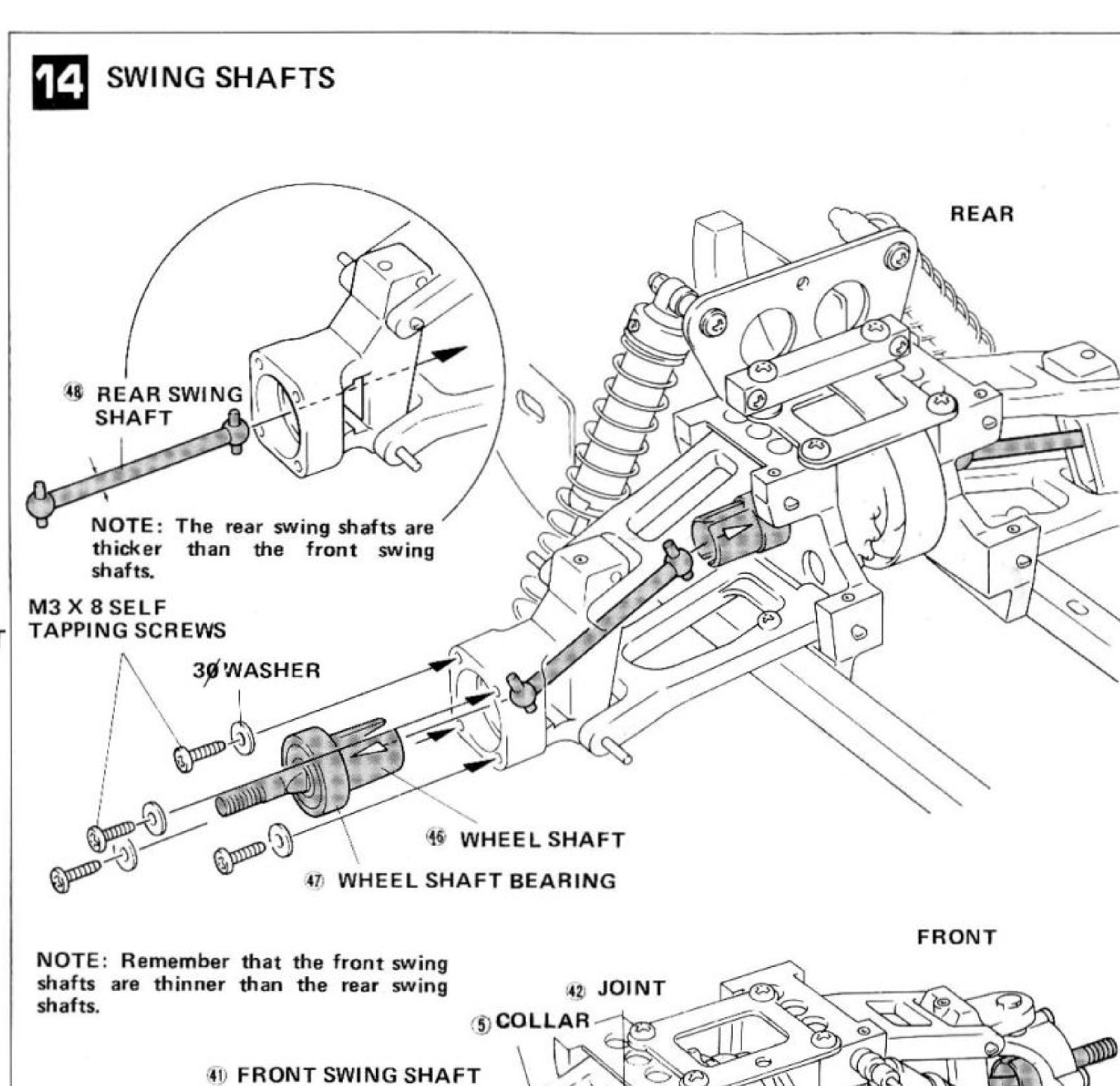
68 E RING (1) (E-4)

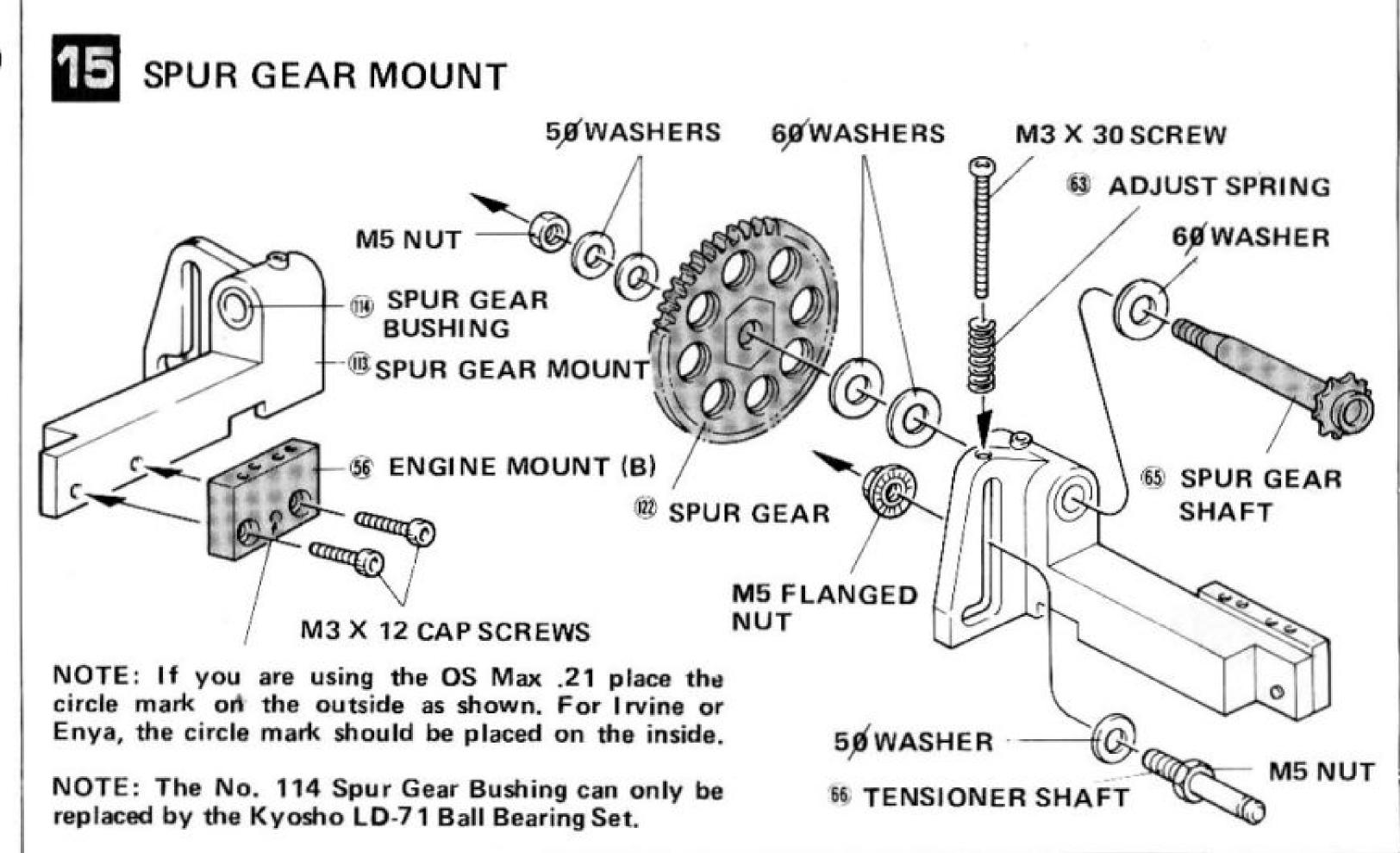
After completing the assembly shown at right, install the tensioner guide and E-Ring onto the tensioner shaft.



67 TENSIONER GUIDE

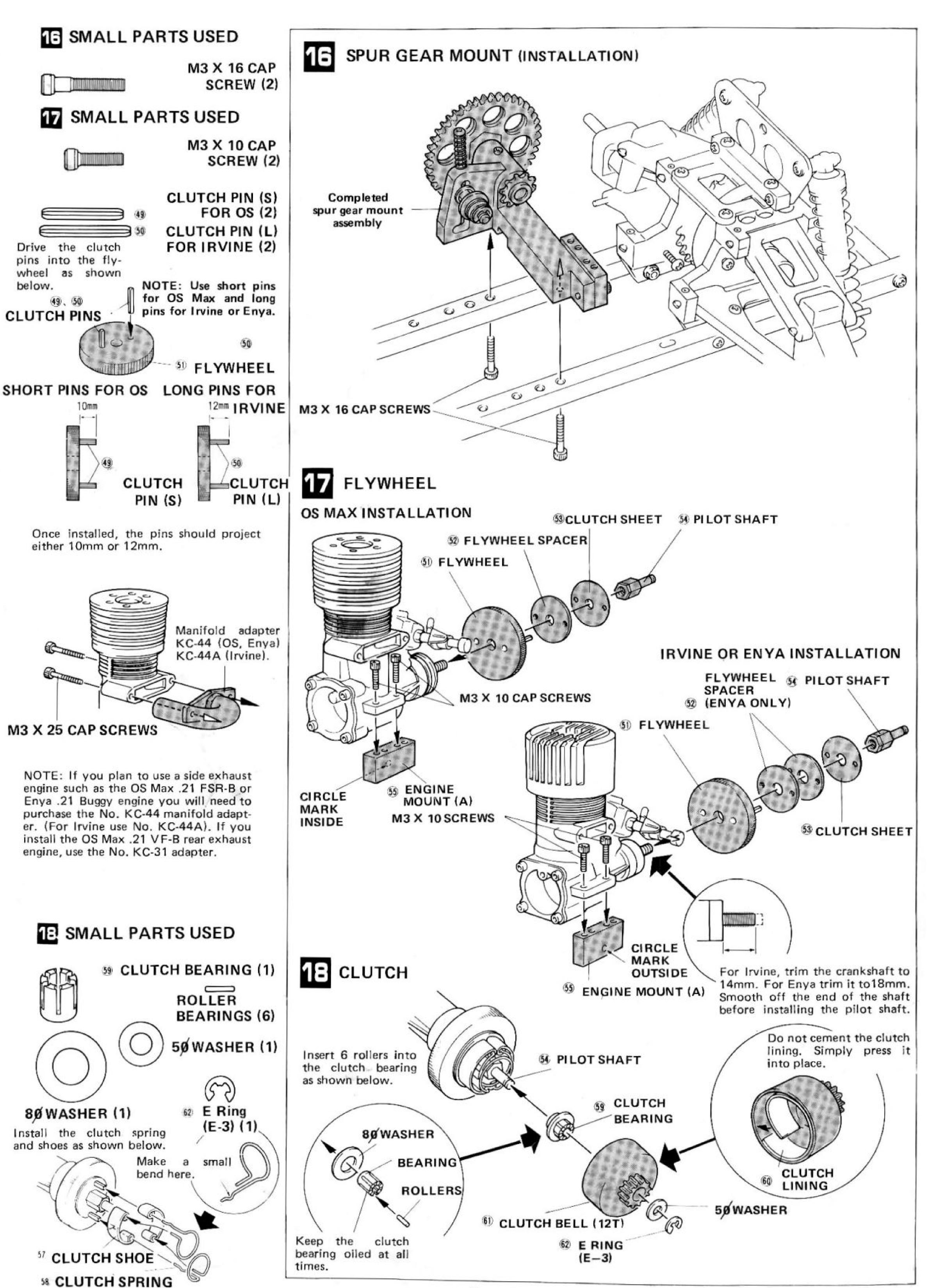
68 E RING (E-4)



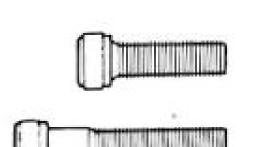


NOTE: Fit the collar into the joint first.

Then Install the swing shaft.



# SMALL PARTS USED

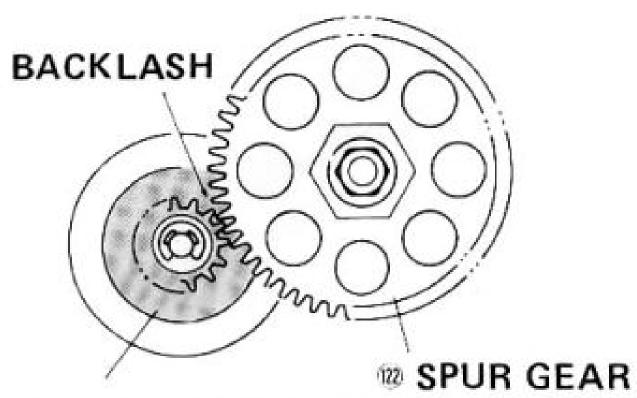


M3 X 10 CAP SCREW (2) M3 X 16

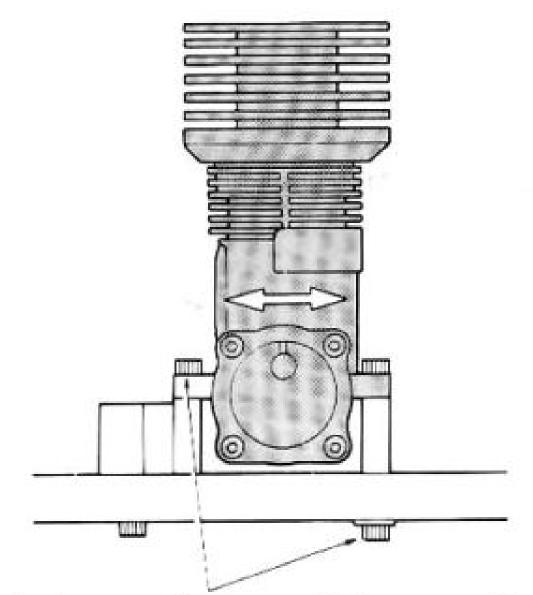


30 WASHER

Adjust the meshing of the gears so that they move freely but still maintain good contact. "Backlash" is the amount of ply in the gear mesh. You should have a small amount of backlash.



60 CLUTCH BELL (12T)



Barely loosen 3 motor bolts to make your backlash adjustments retighten when adjustments are complete.

# SMALL PARTS USED



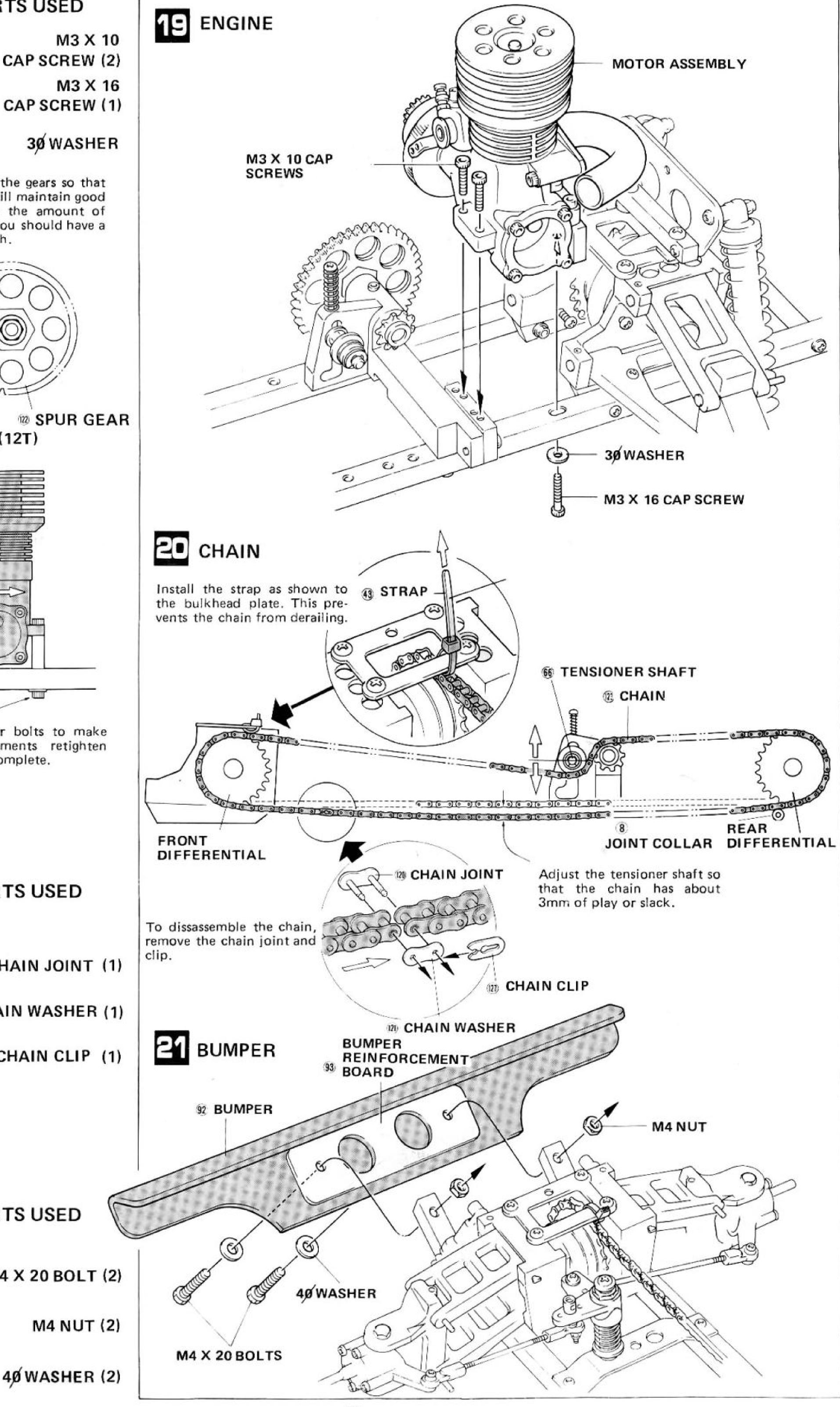
CHAIN JOINT (1)



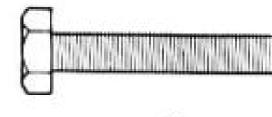
® CHAIN WASHER (1)



CHAIN CLIP (1)







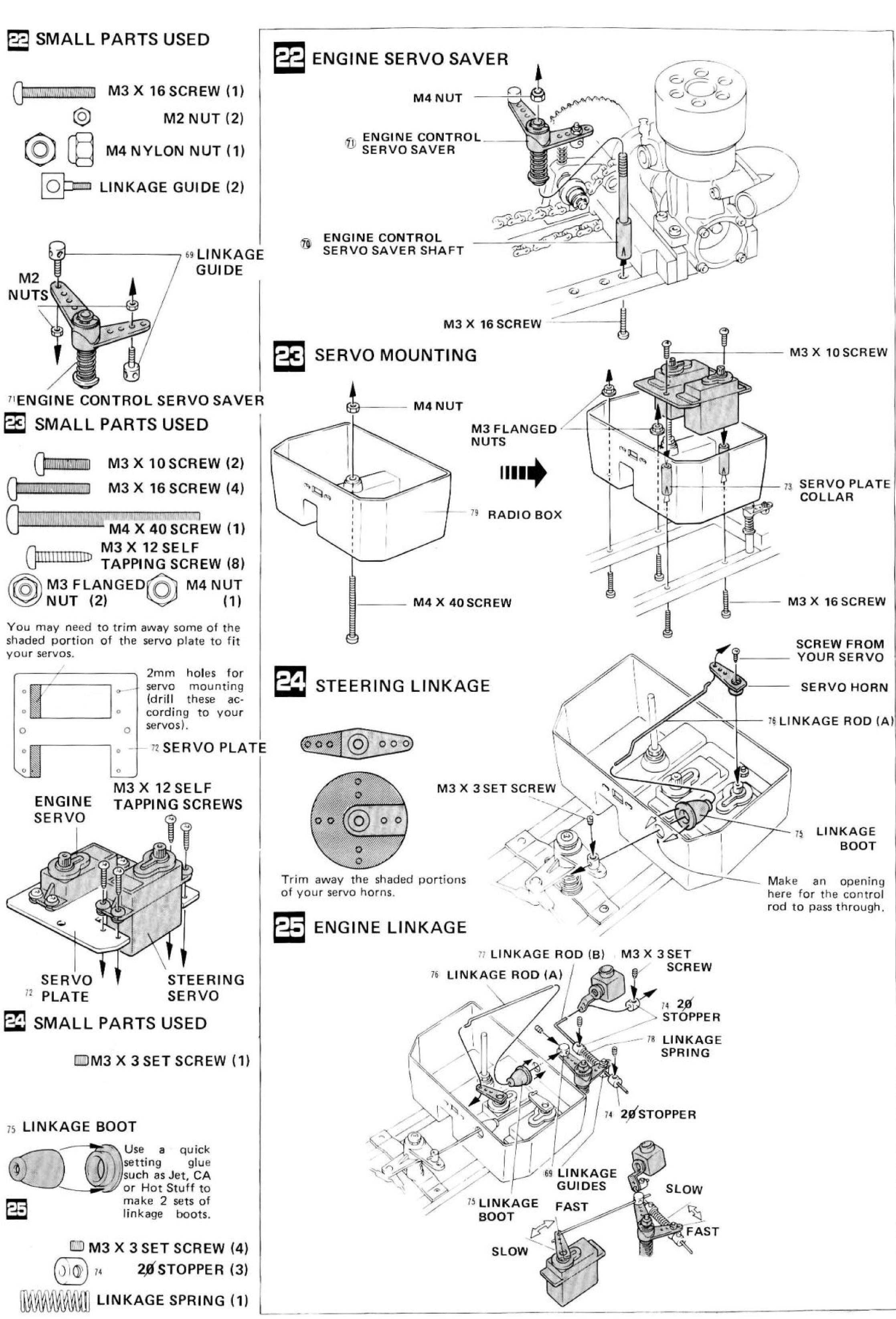
M4 X 20 BOLT (2)



M4 NUT (2)



4Ø WASHER (2)

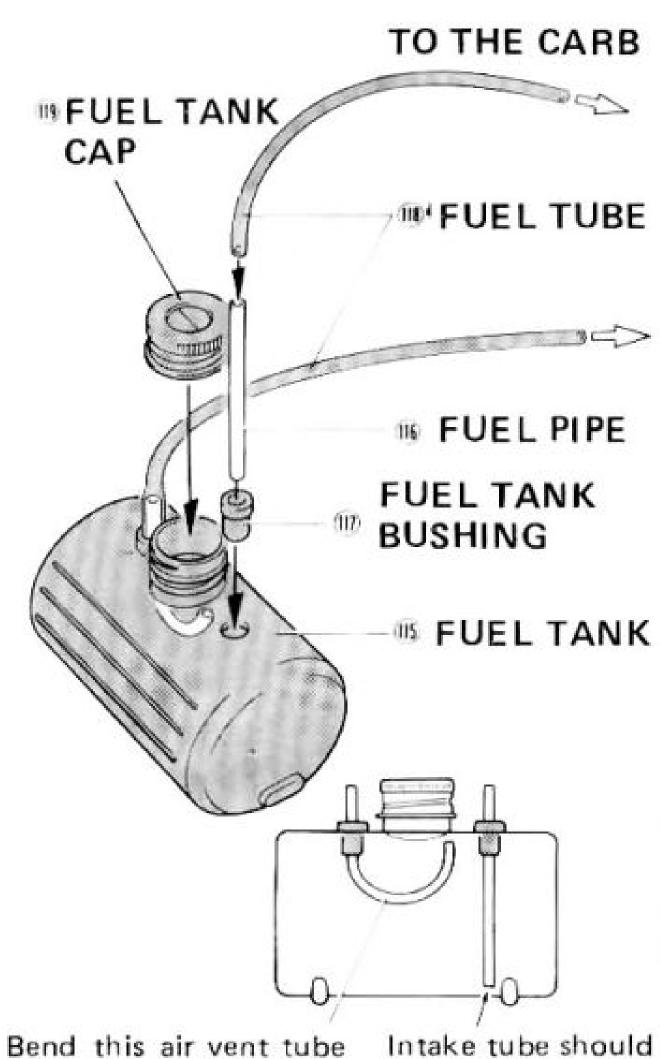




M3 X 3 SET SCREW (2)

20 STOPPER (2)

# SMALL PARTS USED

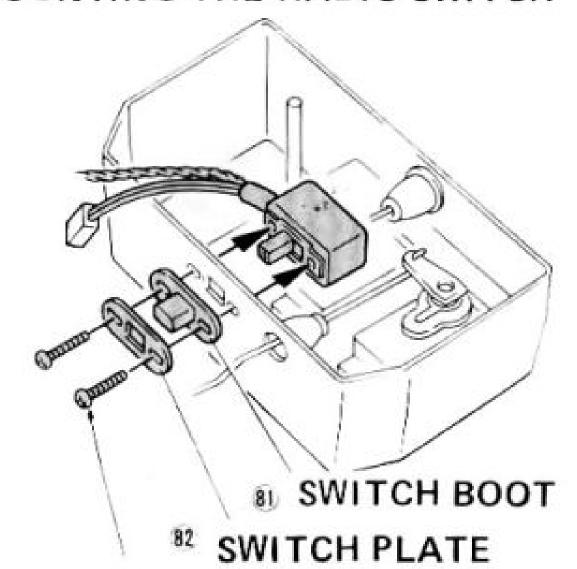


# SMALL PARTS USED MOUNTING THE RADIO SWITCH

as shown.

be near the bot-

tom.

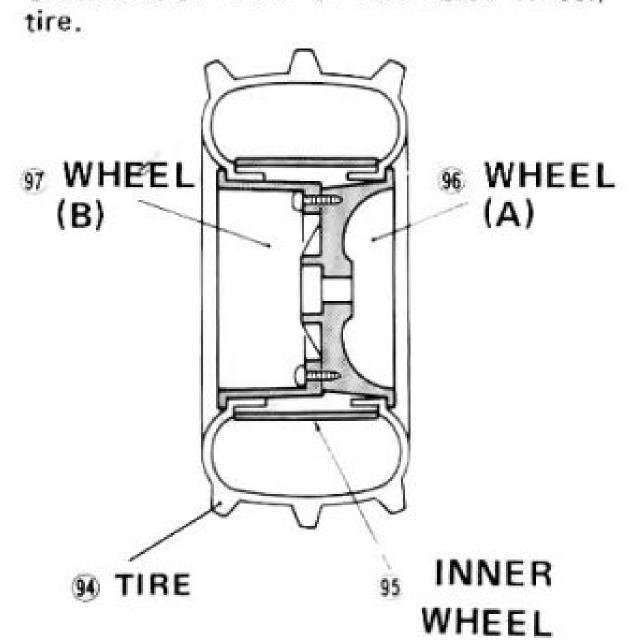


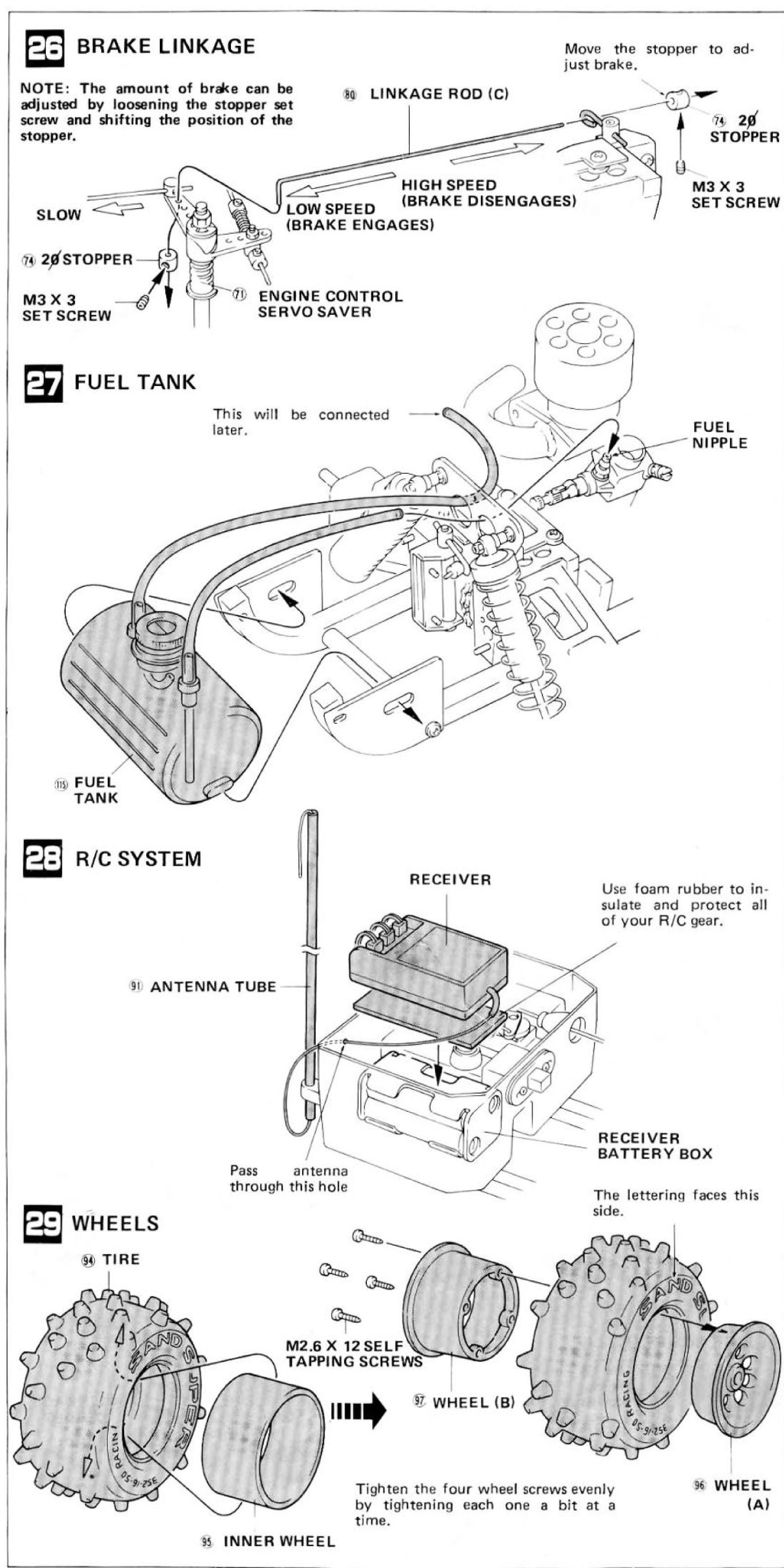
These screws come with your radio system.

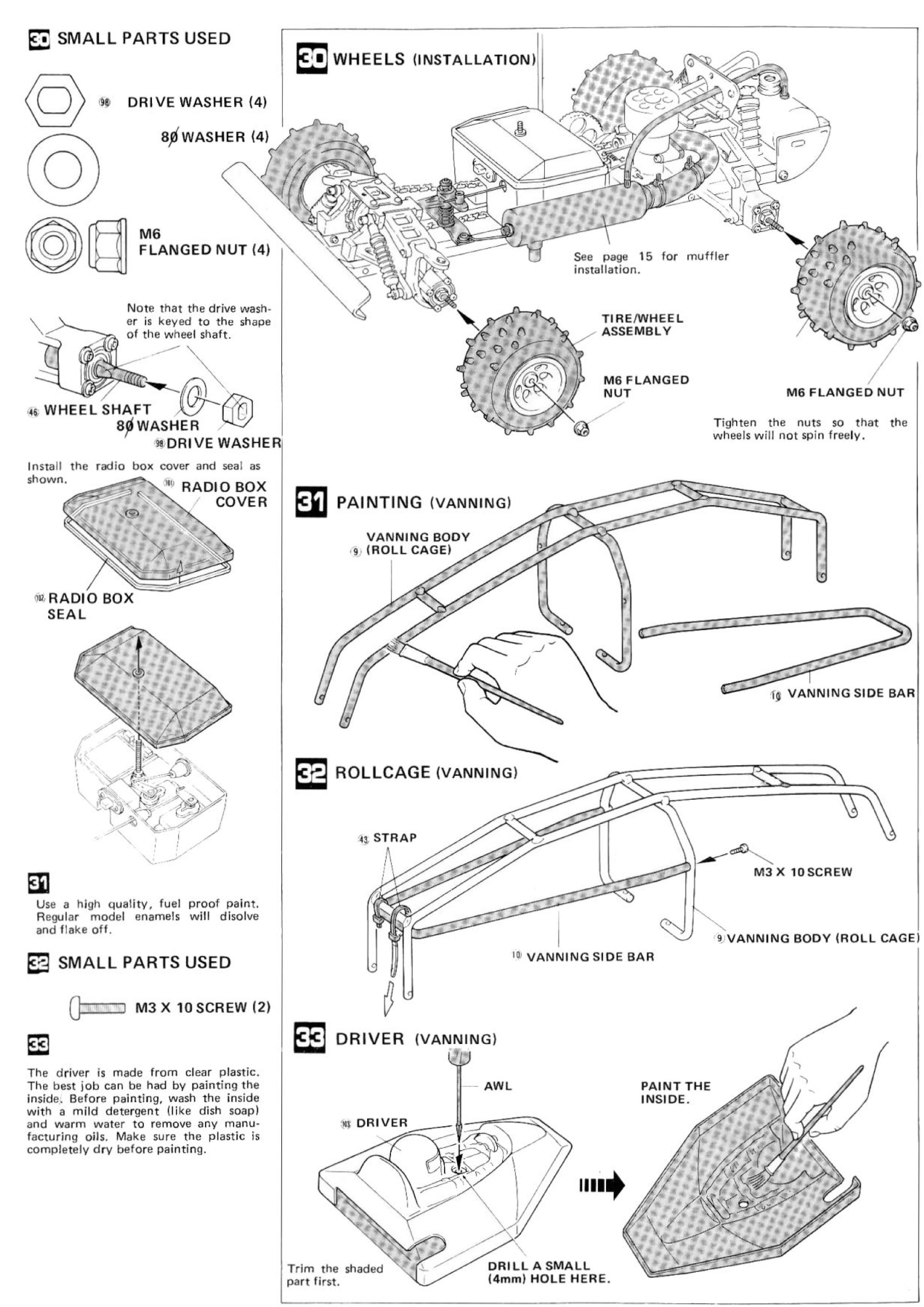
# E SMALL PARTS USED

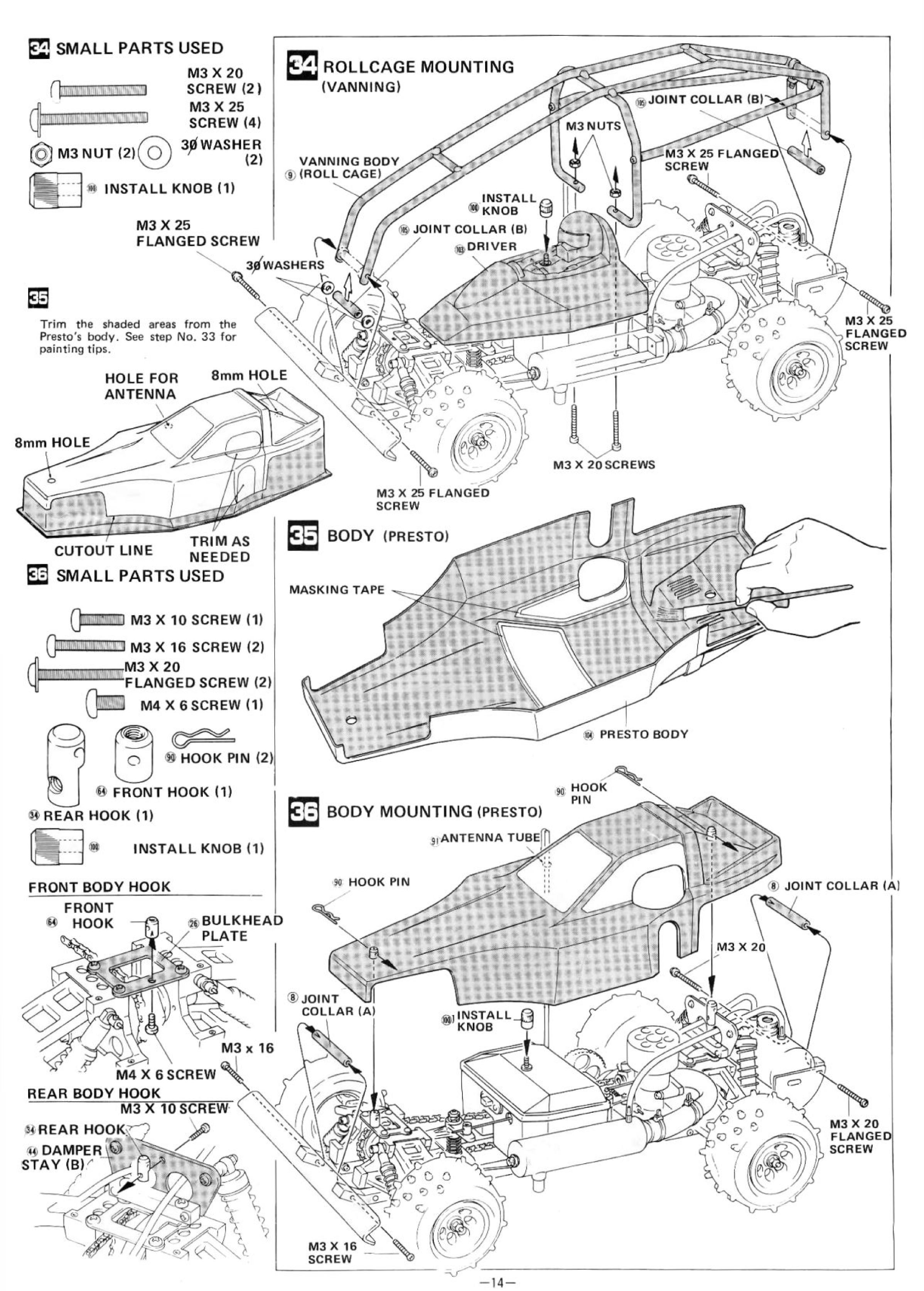
M2.6 X 12 SELF
TAPPING SCREW (16)

Cross-section view of assembled wheel/ tire.

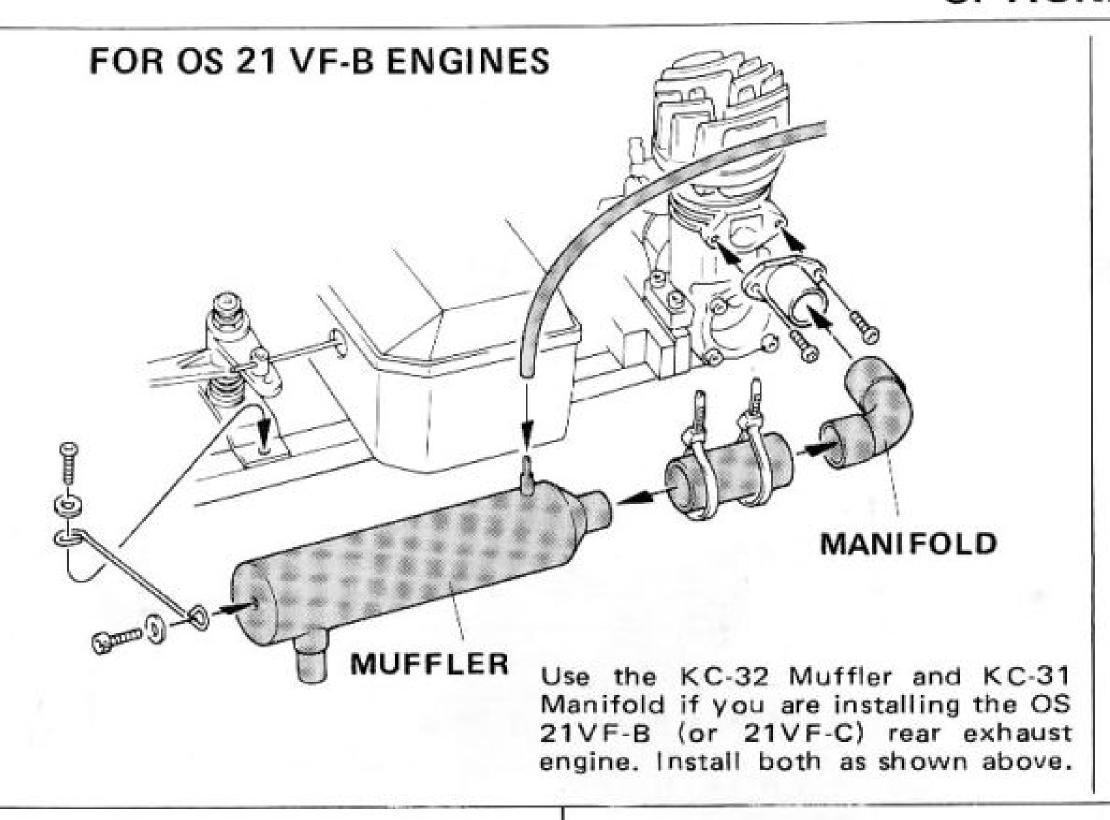




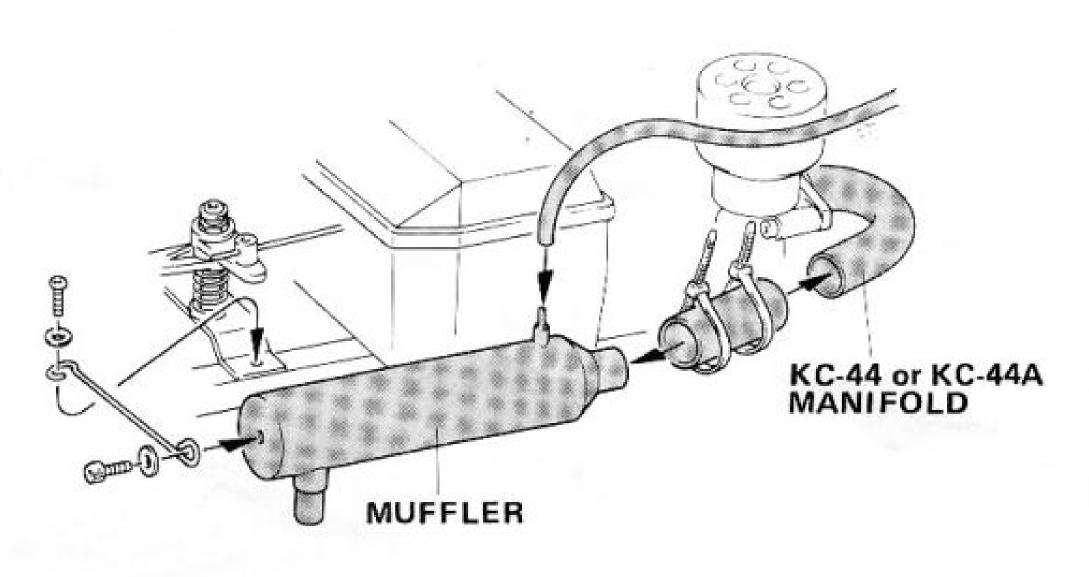




## OPTIONAL PARTS



## FOR OS 21FSR-B, IRVINE 21-25, ENYA .21 ENGINES



Use the KC-32 Muffler and KC-44 Manifold (for OS & Enya) or KC-44A Manifold (for Irvine) if you are installing any of the side exhaust engines listed above. Install as shown.

#### USE AN AIR FILTER

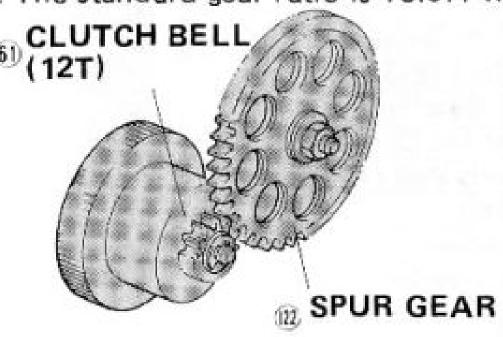


If your engine did not come with an air filter, you must use one! If not, dust and other contaminants will damage your engine. The Kyosho CB-110 Air Filter should do the job for most engines.

#### DIFFERENT GEAR RATIOS

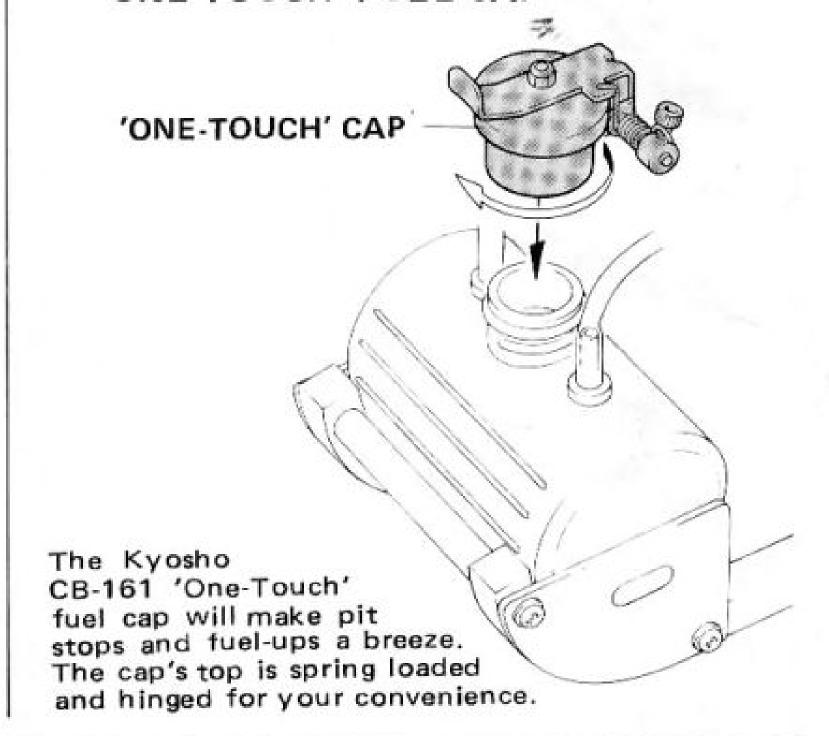
Clutch Bell	Spur Gear	Ratio	
12 T (S D -53)	53 T (LD-27)	10.6:1	
13 T (S D -54)	52 T (LD-26)	9.6:1	
14 T (S D -55)	51 T ( L D -25)	8.7:1	

Three different clutch bell/spur gear combinations are available to tune the car to your specific driving situation. The standard gear ratio is 10.6:1 which is

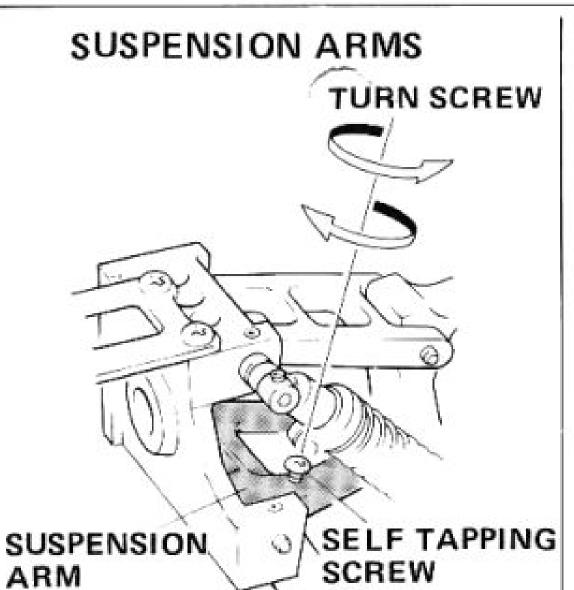


best for climbing and handling. For more speed, try one of the others. Because of the way the gears mesh, the combinations shown should be the only ones used.

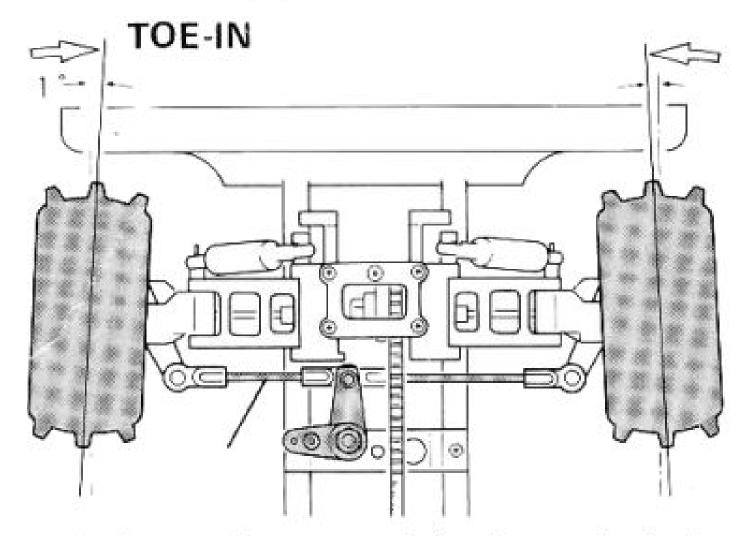
## 'ONE-TOUCH' FUEL CAP



#### ADJUSTMENTS



To adjust the clearance height, turn the screw as shown clockwise to lower and counter-clockwise to raise.



Toe-in is an adjustment of the front wheels that makes them converge slightly toward the front. This helps the model run in a straight line. Toe-in can be adjusted by changing the length of the threaded tie rods. This model seems to run best with about 1 degree of toe-in on each side.

# STARTING THE ENGINE 5 FLYWHEEL

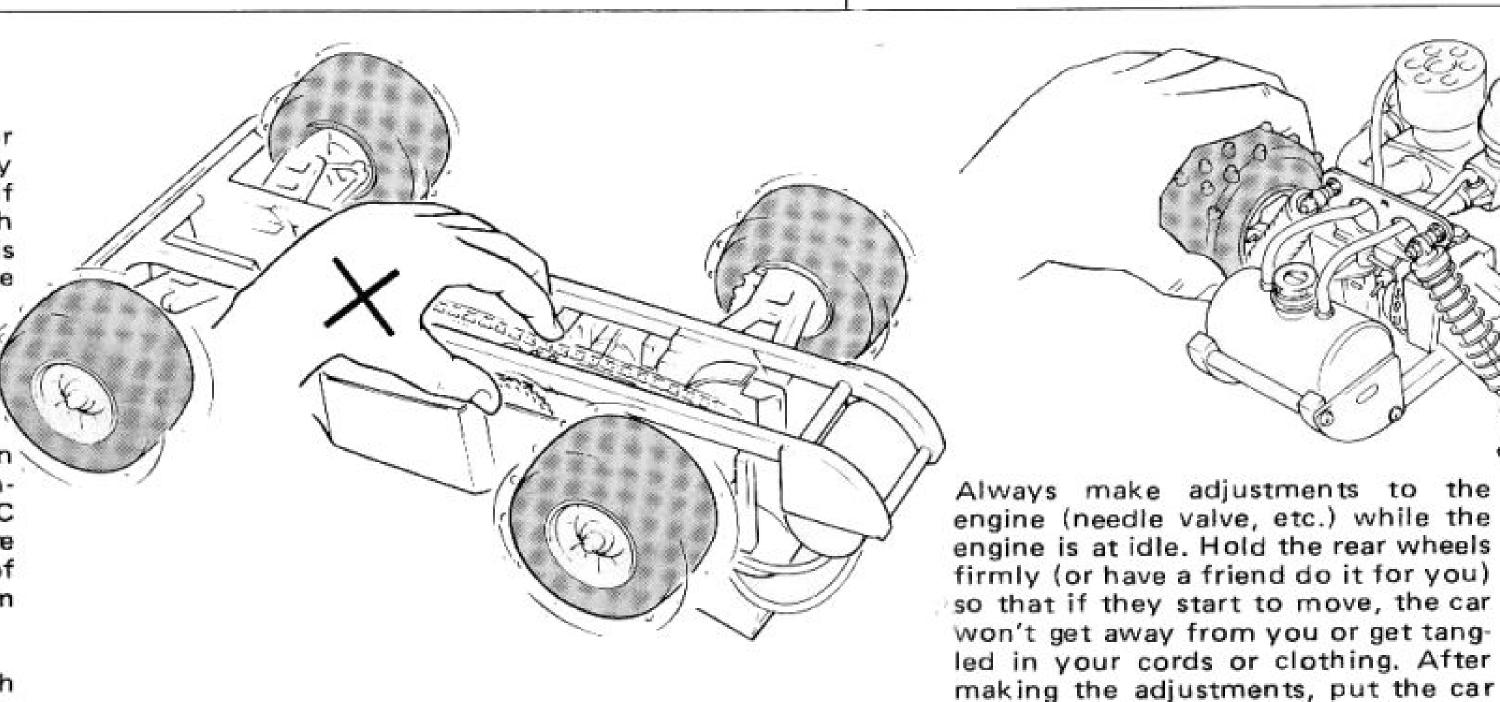
The engine is started by using an electric starter fitted with a rubber "donut". Pressing the starter against the flywheel causes the motor to spin (don't forget to hook up the glow plug to a power source). It may take you a few times to get the "hang" of this, but keep trying. After a short time, you'll be able to start the car on the first try almost every time.

#### CAUTIONS

This car uses a chain and gearing for the drive system that moves at a very high speed and can be dangerous if not handled properly. NEVER touch the chain or gears while the engine is running (even if the drive parts are not turning).

Never allow young children to be in the immediate area that you are running your car. Kids love to chase R/C cars, BUT the Vanning and Presto are high performance vehicles capable of much damage and pain if they run into someone.

\*If the car overturns, do not touch the chain or gears. Try to pick it up by the front bumper.



Always make adjustments to the engine (needle valve, etc.) while the engine is at idle. Hold the rear wheels firmly (or have a friend do it for you) so that if they start to move, the car won't get away from you or get tangled in your cords or clothing. After

down and DRIVE it to see if the ad-

justment is correct.

# **KEY NUMBERS LIST**

# **PURCHASING PARTS FOR YOUR KIT**

Main Chassis . . . . . . . . . . . 1 Set Joint Collar (A) Presto . . . . 4 (A) Vanning . . . Vanning Body (Roll cage) . . . 1 Vanning Side Bar . . . . . . . . . 1 Hub Carrier Mount (R). . . . . 1 Hub Carrier Mount (L) . . . . King Pin . . . . . . . . . . . . . . . . . 4 Damper Oil . . . . . . . . . . . . . . . . . 1 Brake Arm. . . . . . . . . . . . . . . . . Front Swing Shaft . . . . . . . . 2 Presto . . . . . . . . . . . . . . . . . 1 Damper Stay (B) . . . . . . . . . . 1 Damper Collar. . . . . . . . . . . . . Wheel Shaft . . . . . . . . . . . . . . . 4 Wheel Shaft Bearing . . . . . . 4 Clutch Pin (S) for OS. . . . . . 2 Clutch Pin (L) for Irvine . . . . 2 Flywheel . . . . . . . . . . . . . . . . . 1 Engine Mount (A). . . . . . . . . 1 Clutch Shoe . . . . . . . . . . . . . . . . . . 2 Clutch Bearing. . . . . . . . 1 Set Clutch Lining . . . . . . . . . . . . . . . . . 1 E Ring (E-3).......... Adjust Spring . . . . . . . . . . . . . . . 1 Front Hook (Presto Only) . . . 1 Tensioner Shaft . . . . . . . . . . . . . 1 Tensioner Guide. . . . . . . . . . . . . . 1 Linkage Guide. . . . . . . . . . . . . . . 2 Eng. Con. Servo Saver Shaft . . 1 Eng. Con. Servo Saver . . . 1 Set 2Ø Stopper. . . . . . . . . . . . . . . . . 5 Linkage Boots . . . . . . . . . 2 Set Linkage Rod (A) . . . . . . . . . . . . . . 2 Linkage Rod (B) . . . . . . . 1 Linkage Spring . . . . . . . . . . . . 1 Radio Box . . . . . . . . . . . . . . . . . 1 Linkage Rod (C) . . . . . . . . 1 Diff. Metal . . . . . . . . . . . . . . . . . 4 Bevel Gear (L). . . . . . . . . . . . . . . . 4 Bevel Gear (S) . . . . . . . . . . . . . . . 4 Hook Pin (Presto Only) . . . . 2 Bumper Reinforce Board. . . . 1 Inner Wheel . . . . . . . . . . . . 4 Wheel (A) . . . . . . . . . . . . . . Wheel (B) . . . . . . . . . . . . Drive Washer. . . . . . . . . . . . . Radio Box Cover . . . . . . . . Radio Box Seal . . . . . . . . . Driver (Vanning Only) . . . . . Presto Body (Presto Only)...1 Joint Collar (B)(Van. Only)...2 Rear Damper . . . . . . . . . . . . . . . . 2 Rear Sus. Spring Stay. . . . . . 2 Fuel Pipe. . . . . . . . . . . . . . . . . Fuel Tank Bushing . . . . . . . 2 

You can purchase replacement and optional parts for your kit. We offer these parts in convenient parts "packs" which can be purchased separately. To figure out which parts pack you need, find the part in the key number list on the left side of this page. Then consult our parts pack guide, below. When refering to the parts you need, always use the Parts Pack Number. For instance, if you need an Adjust Spring (Key No. 63) ask your dealer for Kyosho Parts Pack LD-22 (Chain Tensioner).

	O. DESCRIPTION	CONTENTS
LD-1	Bumper Eront Hub Carrier	92 93 X 1
LD-5	Front Hub Carrier	①×2
LD-7	Tie Rod Set	29 36 × 1 34 00 × 4
L D -11	Front Swing Shaft	<b>⊕</b> ×2
L D -17	Chain Set	级 ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) (
L D -18	Joint Link	(M) (M) X 1
L D -20	Engine Mount	39 36 X 1
L D -22	Chain Tensioner	63 66 67 68 × 1
L D -24	Spur Gear Shaft	65 × 1
LD-27	Main Gear (53T)	W × 1
L D -35	Eng. Con. Servo Saver	70 70 × 1
L D -36	Tank	
	Mech. Bx. Set (Rad. Bx)	⑩ ⑩ ⑪ X 1 ⑪ ⑪ X 2
L D -38		72 79 80 82 No (0) N2 N3 X 1 73 75 X 2
KC-43	Spike Tires	94 × 2
L D -45	Linkage Set	6 74 78 80 77 X 1 69 76 X 2
L D -47	Servo Saver (Steering)	3 4 X 1
L D -70	Clutch Bearing	59 × 1
L D -74	Drive Washer	98 × 4
L D - 76	Damper Rubber Bushing	ર્ક ¥ 10
L D - 79	Rear Differential	35 83 86 87 89 SIX 1 84 85 FIX 2
CB-11	Swing Shaft	48 × 2
C B - 13	Rear Wheel Shaft	66 × 2
C B - 15	Ball Bearing	① × 2
	Clutch Parts Set	
C B -28	Joint	60 × 1 49 57 58 × 2
C B -52		82 × 2
C B67	Clutch Spring	58 × 4
C B - 72	E Ring (E-3)	62 × 4
K C -41	Ball Bearing	30×2
C B -89	Rear Oil Damper	15 28 66 X 2
S D -53	Clutch Bell (12T)	€0 × 1
S D -56	Lining	60×5
S D - 76	Flywheel	50 × 1
S D - 79		90×5
	Clutch Sheet	
FM-20		53 × 5
F M-28A	Flywheel Spacer	52 × 1
FM-29	Body Pin	90 ×10
FM-73	Pilot Shaft	36 × 1
S C -85	Front Damper	15 28 30 (11) 312 329 X 2 99 X 1
EF-38	Strap	43×6
K C - 1	Main Chassis	①×1
K C - 2	Plate Set	②×1 ⑦ 26×2
KC-6	Hub Carrier Mount	12 13 X 1
KC-7	King Pin	19×4
KC-8	Bulkhead	16 17 × 1
	Front Arm Set	
K C - 9		18 19 X 1
K C -10		(20 (28 (26 × 1
K C -11	Arm Shaft Set	20 × 6 20 22 × 4 23 × 2
K C -16	Spur Gear Mount	10 × 1 10 × 2
K C -17	Collar Set	5×2 6×7
K C -18	30 Stopper	25 × 10
K C -19	Rear Spring Set	(W) (W) X 2
K C -20	E Ring (E-4)	68 × 4
K C -21	Joint Collar (Presto)	8×3
and the second second second	Joint Collar (Vanning)	
K C -22		
K C -27	Brake Set Caliper	33 36 39 40 X 1
K C - 30	Stainless Disc Set	35 37 38 × 1
K C −33	Body (Vanning)	9 10 × 1
K C -34	Body (Presto)	® × 1
K C -35	Rear Spring Stay	32 44 × 1
K C - 36	Body Hook (for Presto)	30 60 × 1
K C −37	Wheel Set	93 96 97 × 2
K C -38	Screw Set & Wrench	1 Set
K C -39	Decal	® × 1
KC-42	Clutch Pin Set	49 50 × 2
NU-42	Crutch Fill Set	OPTIONAL PARTS
	Main Cons (EAT)	
L D - 25	Main Gear (51T)	Use with SD-55 as a set (8.7:1)
L D −26	Main Gear (52T)	Use with SD-54 as a set (9.6:1)
L D -71	Spur Gear Bearing	Replaces Key No. 114 (2 Required)
L D -82	Parts for OPS, Picco Eng.	
C B-110	Air Cleaner	New Foam Type
C B - 161	One Touch Cap	
S D -54	Clutch Bell (13Z)	Use with LD-26 as a set
S D -55	Clutch Bell (14Z)	Use with LD-25 as a set
		st Fits OS 21VF-B & VF-C
K C -31	Muffler	
K C -32		Side authorist annings only
KC-44	Muff. Manifold-OS/Enya	Side exhaust engines only
1880	Damper Oil	
1881	Hard Oil for Diff.	
C B -84	Ball Bearing	Replaces Key No. 31
	Heavy Duty Clutch Parts	Clutc's Shoes, Springs and Pins
KC-45		







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INTEGRA 4W







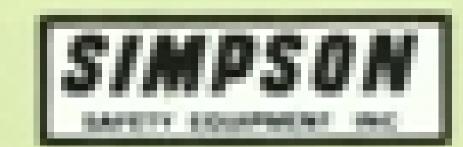




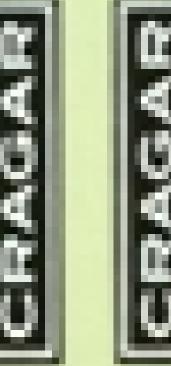




















BEAN WIT BEAN WIT







BREWE & FURE TUNE



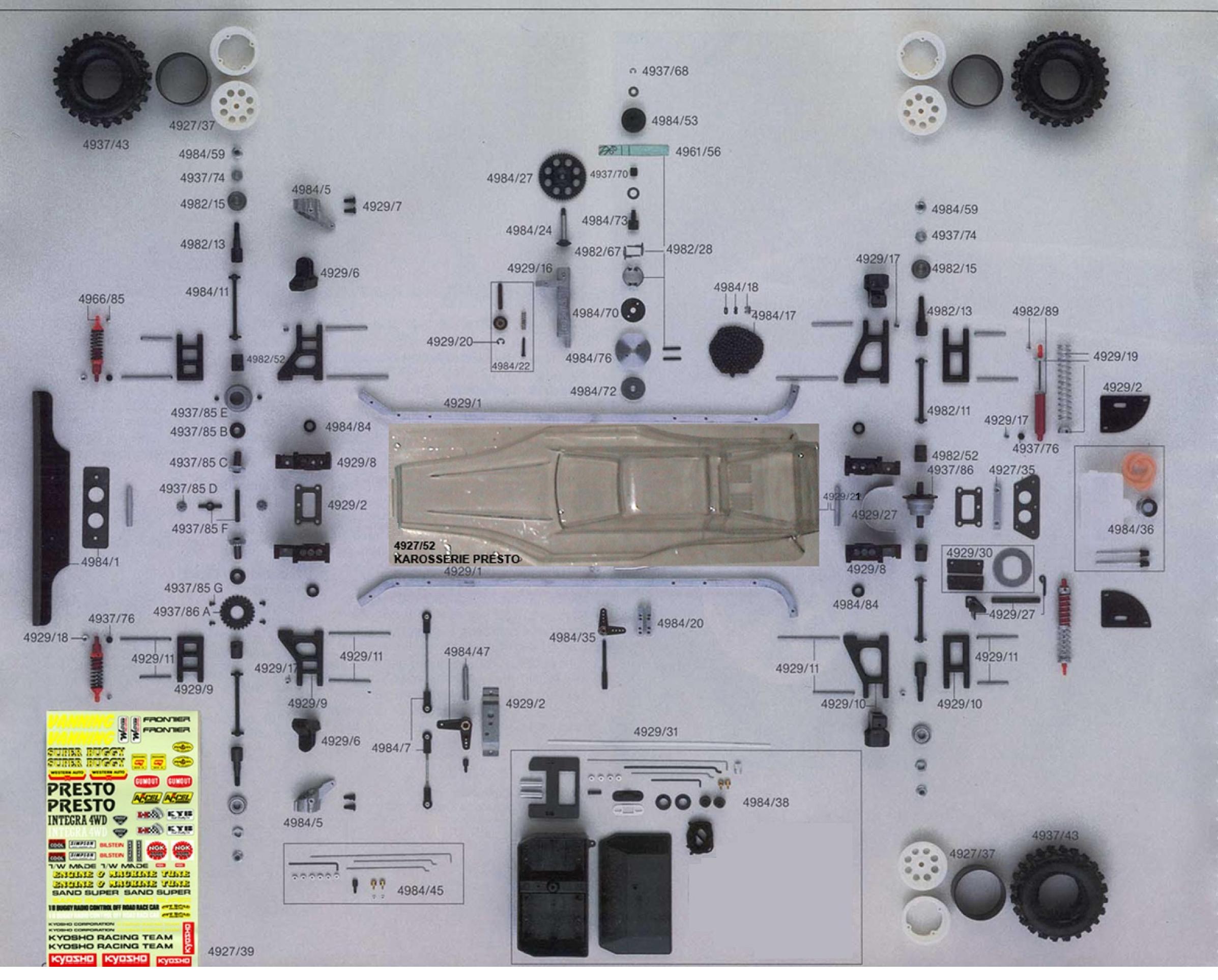
BRICHES & FURE TURE



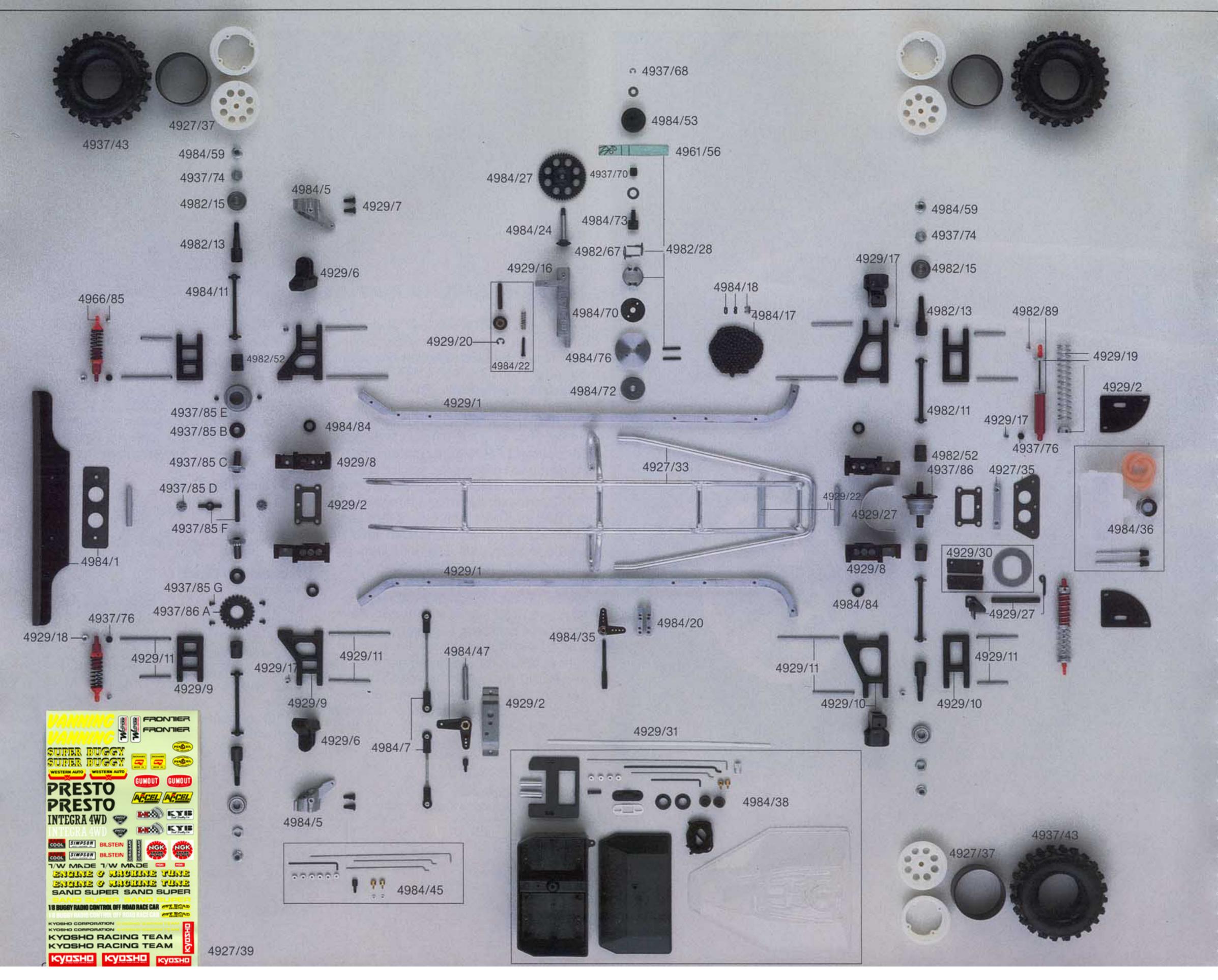


SAND SUPER SAND SUPER

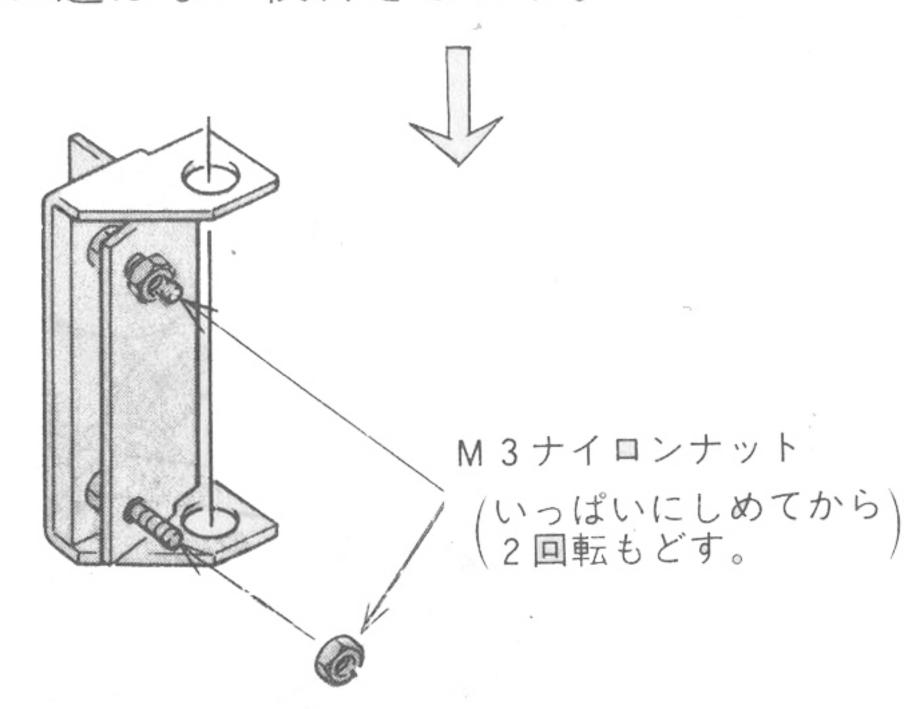




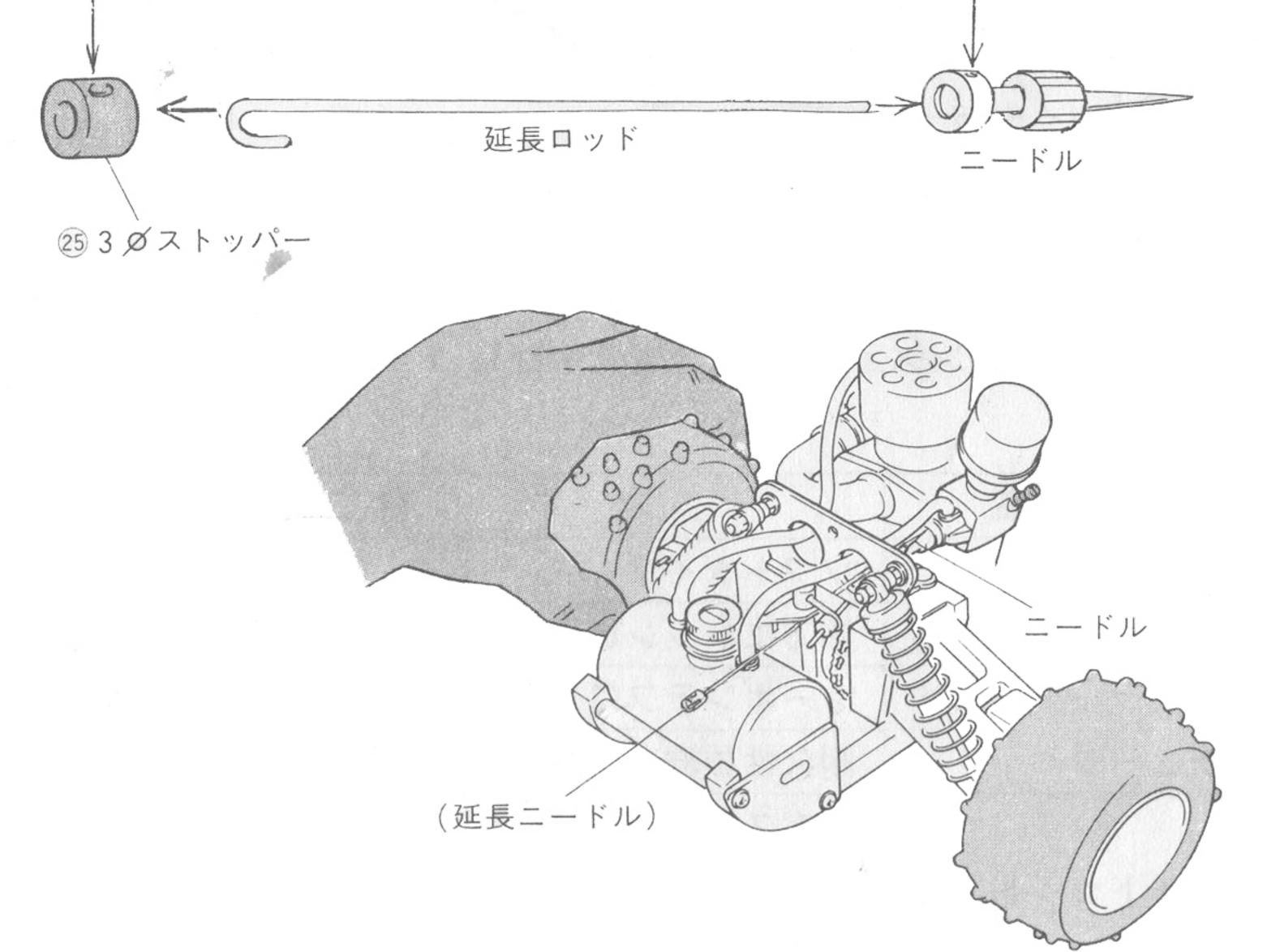


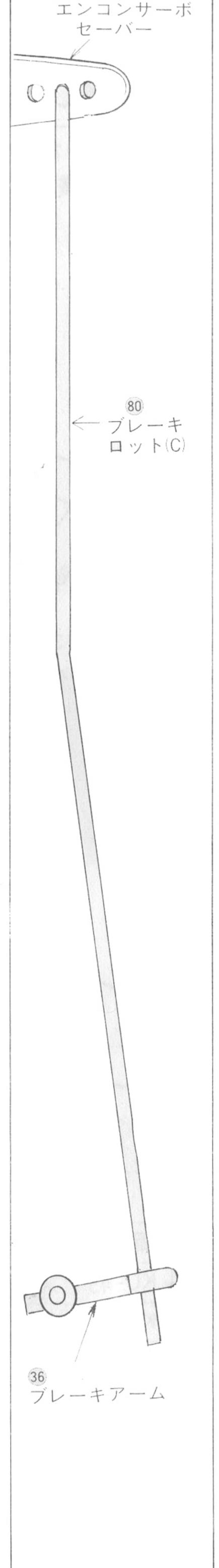


組立説明書5ページの8プレーキキャリパーのくみつけ、の2の所で下図のようにM3ナイロンナットをいっぱいにしめてから2回転位もどし、38プレーキパット(B)が左右に少し遊ぶように、ナイロンナットをとりつけて下さい。このナイロンナットはブレーキパット(B)が必要以上に左右に遊ばない役目をします。



- 組立説明書12ページの図ブレーキのリンケージの所で®リンケージロッド(C)を右図と同じように曲げて下さい。
- エンジンをOS-21シリーズ使用で2K又は2Dキャブレターを使用 する場合、ニードル調整が安全に出来るよう延長ニードルロッドを追 加しました。下図のように組立、取付けして下さい。

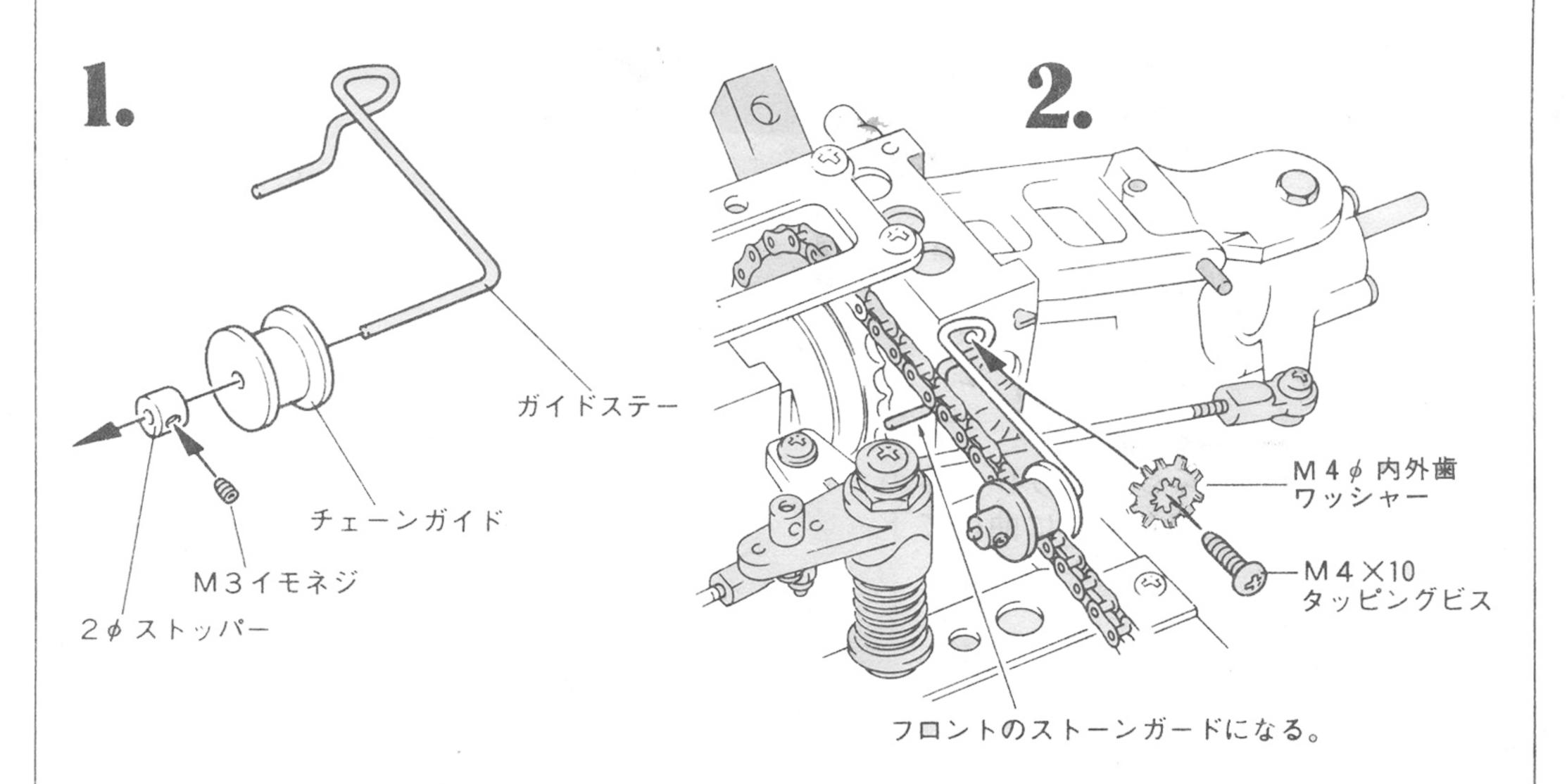


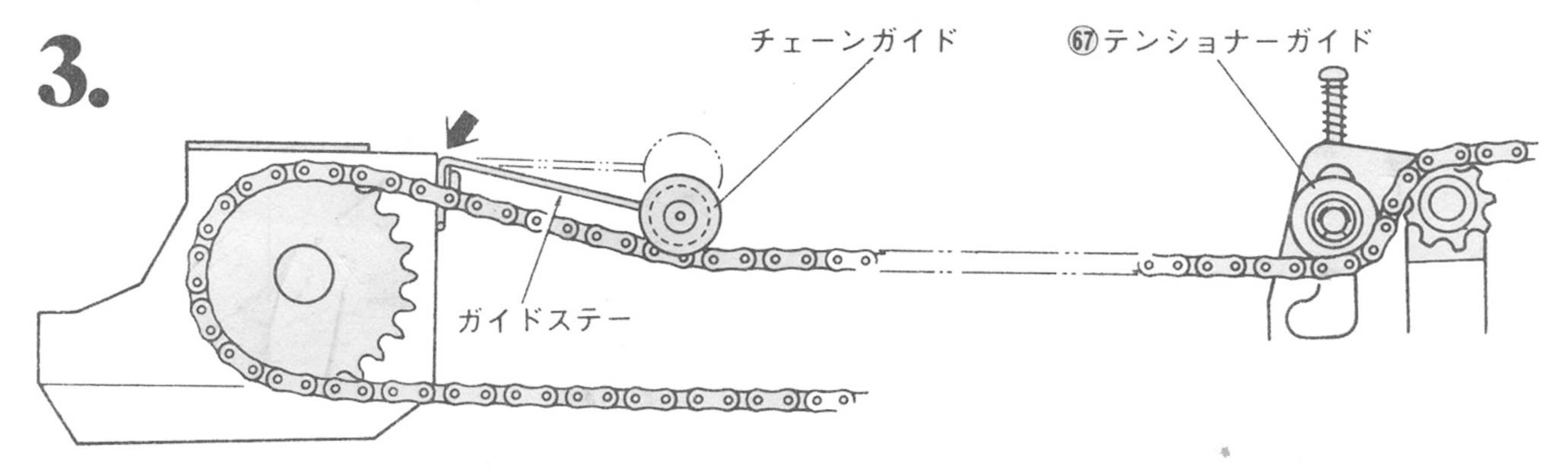


# インテグラ4WD 補足説明書

〈チェーンガイドのとりつけ〉

取扱説明書10ページ回図でチェーンをとりつけたら下図のようにチェーンガイドをとりつけて下さい。

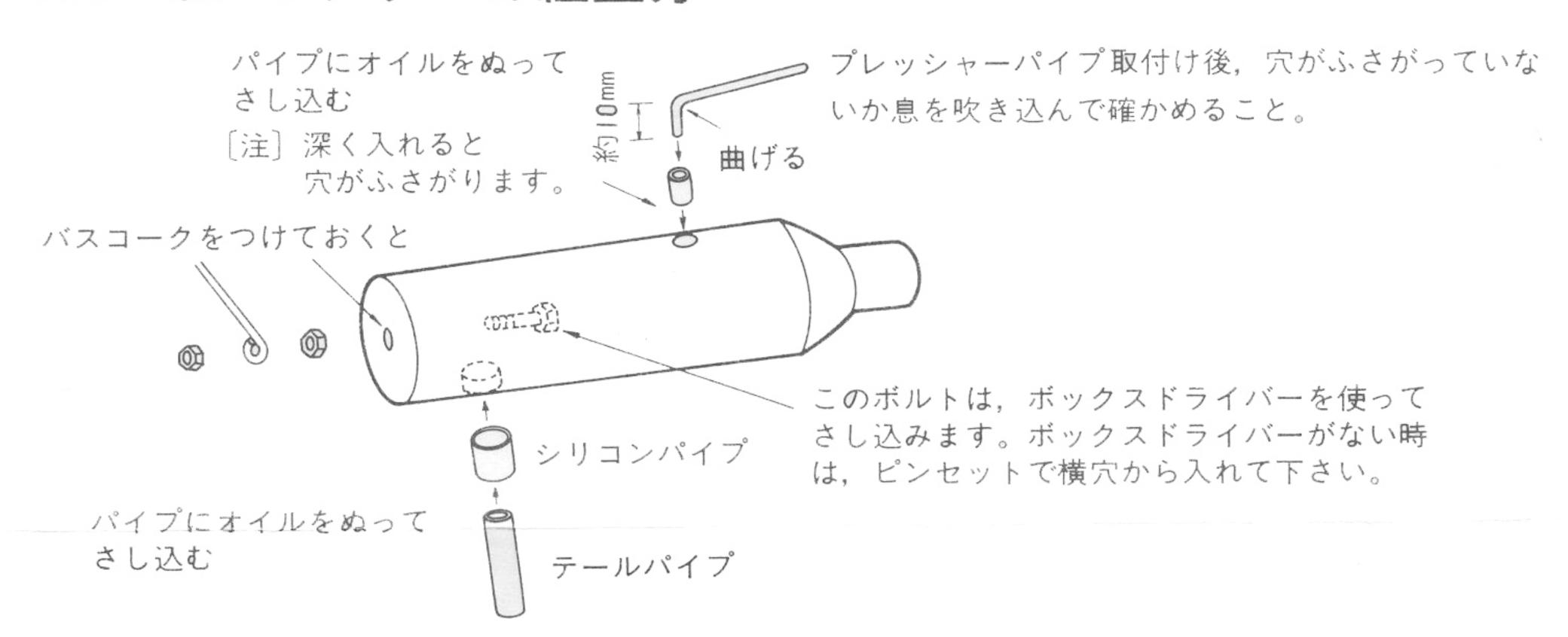




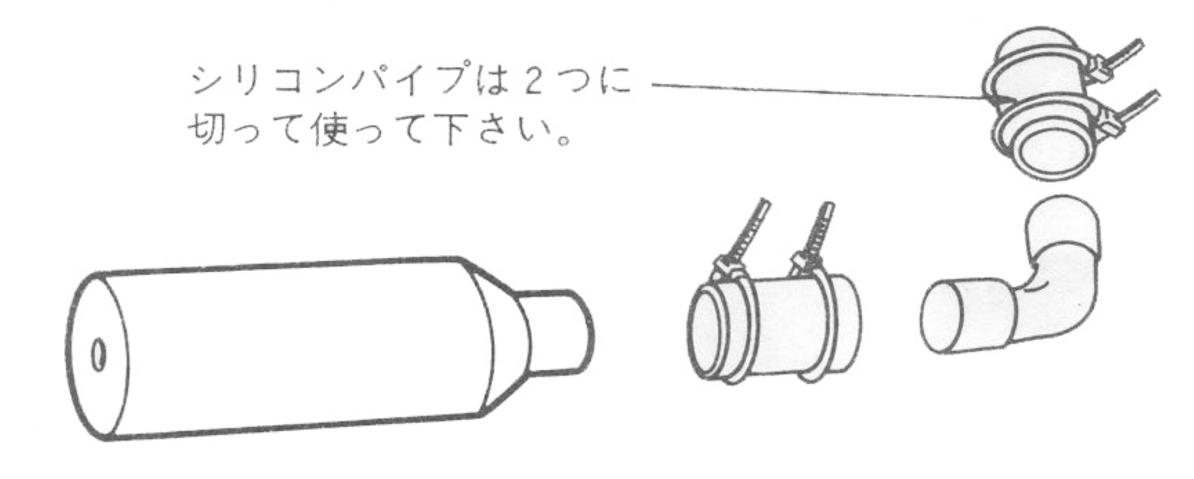
※ガイドステーの◆印のところを図のように少し下に曲げ、チェーンをチェーンガイドが常に押さえつけるよう、ガイドステーとテンショナーガイド⑥を調整し、チェーンがはずれないよう点検して下さい。

品番	部 品 名	内容	定価	送料
KC-43	スパイクタイヤ	ソフトタイプ	2,800	350
KC-44	マフラーマニホールド	側方エンジン専用	2,800	120
KC-45	スペシャルクラッチパーツ	カーボンテフロン製	1,300	120
KC-46	バイトンチューブ	耐久性抜群なマフラーチューブ	2,000	120
KC-47 チェーンガイドセット		2øストッパー、M4ø内外歯ワッシャー		
	ガイドステー、チェーンガイド、	450	120	
	M4×10タッピングビス 各1ケ			

# KC-32 マフラーの組立方



# KC-31 マニホールドのつけ方



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