

RADIO CONTROLLED ELECTRIC POWERED RACING BUGGY
4WD OFF-ROAD RACER
JAVELIN

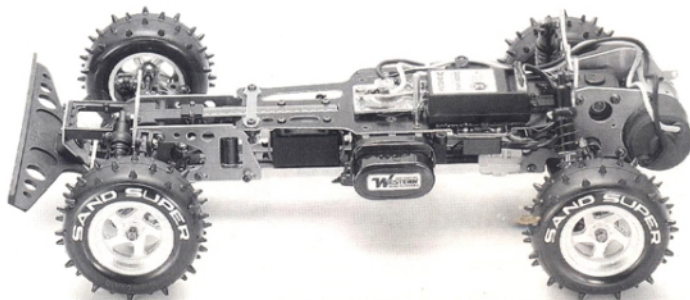
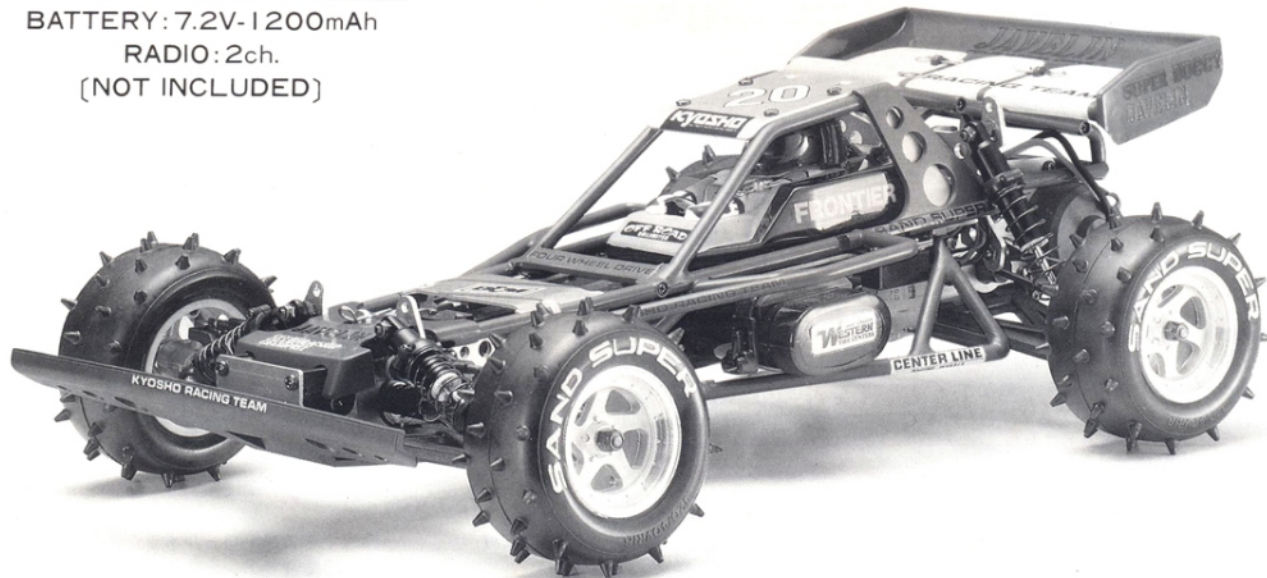
- DESIGNED FOR HIGH PERFORMANCE
- FOUR-WHEEL DRIVE FOR MAXIMUM TRACTION
- SELECTABLE FRONT/REAR POWER BIAS
- EXTRA-LONG WISHBONES TO ELIMINATE BUMP STEERING
- SPIKE TIRES OPTIMIZED FOUR-WHEEL DRIVE
- LIGHT WEIGHT FOR QUICKEST ACCELERATION
- SHIELDED DRIVE CHAIN FOR LONGEST LIFE
- TRUE GEAR-TYPE DIFFERENTIALS FRONT AND REAR
- PRECISION-MOLDED DRIVETRAIN GEARS FOR SMOOTH POWER DELIVERY
- LOW-RESISTANCE SPEED CONTROLLER FOR LOW POWER LOSS
- HIGH GROUND CLEARANCE AND LONG SUSPENSION TRAVEL
- OIL-FILLED SHOCK ABSORBERS ON ALL WHEELS
- HIGH-STRENGTH ALUMINUM AND GLASS-FILLED NYLON PARTS
- PERFECT 50-50 WEIGHT DISTRIBUTION
- TRUE-GEOMETRY ACKERMAN STEERING LINKAGE
- SHOCK ABSORBER MOUNTS SUITABLE FOR OVERSIZE SHOCKS

1:10 SCALE

BATTERY: 7.2V-1200mAh

RADIO: 2ch.

[NOT INCLUDED]



KYOSHO
THE FINEST RADIO CONTROL MODELS

KIT No.3031

4WD OFF-ROAD RACER

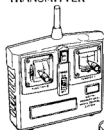
JAVELIN

THINGS YOU WILL NEED BESIDES THIS KIT

2 CHANNEL RADIO SYSTEM

A two channel two servo radio control system is required for running the Javelin. The various components are pictured below.

TRANSMITTER



SERVO



BATTERY HOLDER



SWITCH



RECEIVER

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

CARS



AIRPLANES

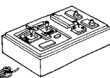


BOATS

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).



NOTE: The dimensions shown are the maximum sizes which will fit.

SERVO

RECEIVER

BATTERY PACK

A 6-cell 7.2V battery similar in shape to the one shown here is required. The Kyosho #2218 is a good choice.



CHARGER

You'll need a charger to charge your battery. Kyosho offers three types:

Model	Name	Time	Rate %	Features
No. 2207	Quick Charger (DC 12V)	20 Min	70%	Inexpensive OK for sport use
No. 1846	Multi Charger (DC 12V)	20 Min	100%	Full charge wide range of batteries
No. 1848	Auto Charger (DC 12V)	20 Min	100%	The best fully automatic operation Easy to use suitable for competition

No. 2207 Quick Charger



No. 1848 Auto Charger



REQUIRED TOOLS

These ARE included with the Javelin.

1.5mm Allen Wrench

2mm Allen Wrench

Silicone Grease

Screw Locking Compound

These ARE NOT included with the Javelin.

Phillips Screwdriver

5/16" Nut Driver

Scissors

Needle Nose Pliers

Wire Cutters

Axle

Sharp Hobby Knife

Cyanoacrylate glue (such as Jet CA, Hot Stuff or Krazy Glue).

Masking Tape

Paint



Paint Brush



OPTIONAL MOTORS



480G

The Javelin comes with a Mabuchi RS-540 motor as stock. You may wish to upgrade the performance by purchasing a Kyosho LeMans motor. We have found the best ones to be the 480G, 360PT and 360ST.

BALL-BEARINGS



Ball Bearings greatly improve performance and reduce maintenance. The Kyosho #11-001 is a complete set of optional bearings for your Javelin.

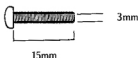
IMPORTANT! BEFORE YOU BEGIN

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.

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 labeled as a "4 Ø Washer" (this would be a washer with a 4mm inside

M3 x 15 SCREW



4 Ø WASHER



KYOSHO
THE FINEST RADIO CONTROL MODELS

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In addition to the shock oil (red liquid) you will also find a small tube labeled "sealant". This bluish-green locking compound may be used on all nuts and bolts in the car to ensure reliability. We have labeled those parts of the car where it is ESPECIALLY IMPORTANT to apply the compound with this symbol

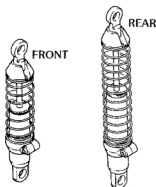
For use this type of cement only on the nuts and bolts. When it calls for cement in the manual, use an "instant" type of glue such as Loctite, CA, Hot Stuff or Krazy Glue. Another small tube of "silicone grease" (lubricant) is also included. Use it where you see the symbol

Two types of screw threads are used in construction of your model. Machine screws have machine threads and are indicated by the label "Screw"



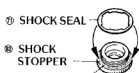
Self-tapping screws have different threads and a more tapered shape and are indicated by "S/T screw"

1 VIEW OF ASSEMBLED SHOCKS

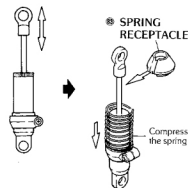


3 FILLING SHOCK WITH OIL

Make sure Shock Seal is in place on shoulder of Shock Stopper when ready to reassemble.



When reassembled, move piston up and down to see if shock operates smoothly. If not, decrease amount of oil.

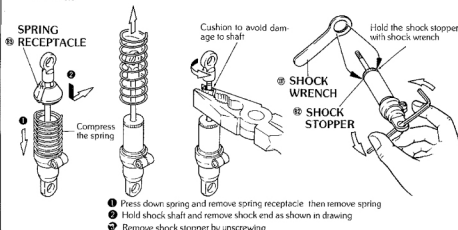


Adjust length of shock by screwing the shock end in and out

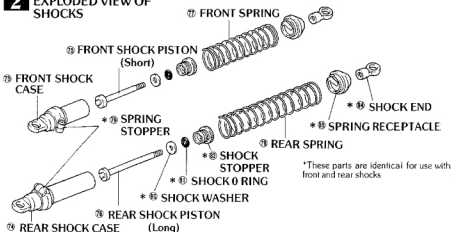


1 DISASSEMBLY OF SHOCKS

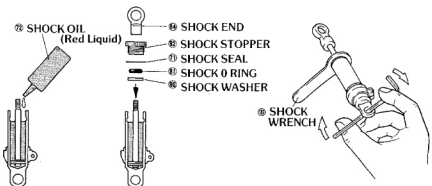
The shocks come assembled, but disassembly is required to install dampening oil. Front and Rear Shocks are different, so disassemble shocks one at a time to avoid mixing parts. Disassemble, fill with oil, then reassemble.



2 EXPLODED VIEW OF SHOCKS



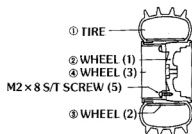
3 FILLING SHOCK WITH OIL



1. Press Piston to the bottom. Pour oil to level shown in drawing. Make sure there are no bubbles in oil.
2. Assemble shock in the sequence shown.
3. Tighten stopper firmly as illustrated.

4 CROSS-SECTIONAL VIEW OF TIRE AND WHEEL

M2 x 8 S/T SCREW (20)



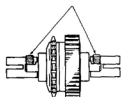
5 INSTALLATION OF JOINT

M4 x 4 SET SCREW (4)

80 x 14 BEARING (4)

JOINT (4)

Set the M4 x 4 set screw to the flat on the shaft and tighten



6 ASSEMBLY OF GEAR BOX

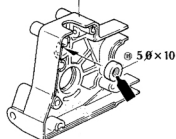
M3 x 18 S/T SCREW (3)

M4 x 4 SET SCREW (1)

50 x 10 BUSHING (1)

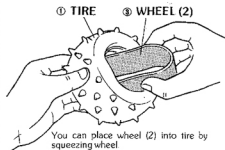
NOTE! This bushing can be replaced with an optional bearing (see page 20 for details)

GEAR BOX (L)



Insert 5 mm Bushing (Metal) into Gearbox (L)

4 ASSEMBLY OF TIRE AND WHEEL



M2 x 8 S/T SCREW (5)

WHEEL (3)

Have SAND SUPER facing outside of tire.

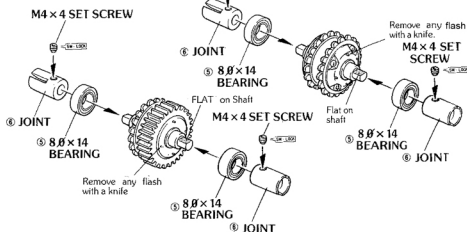


If wheel to tire fit is too tight, use soapy water for lubrication

WHEEL (2)

5 INSTALLATION OF JOINT

M4 x 4 SET SCREW



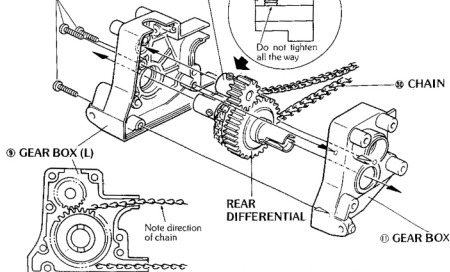
6 ASSEMBLY OF GEAR BOX

M3 x 18 S/T SCREW

FINAL PINION

M4 x 4 SET SCREW

Do not tighten all the way



Install the parts in Gear Box (L) as shown then cover with Box (R). Install M3 x 18 S/T Screws and tighten

7 INSTALLATION OF GEAR BOX

M3 x 8 SCREW (3)

M3 x 45 SCREW (4)

Ⓐ CENTER SHAFT (1)

M3 SPRING WASHER (4) Ⓒ
INSTALLATION OF CENTER GEAR SHAFT

Ⓐ REAR PLATE

M3 x 8 SCREW

Ⓐ CENTER GEAR SHAFT

8 INSTALLATION OF FINAL PINION

Ⓐ 5 ⌀ x 10 BUSHING (1)

NOTE! This bushing can be replaced with an optional bearing (see page 20 for details)

9 INSTALLATION OF REAR SHOCK STAY

M3 x 12 S/T SCREW (2)

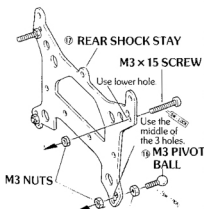
M3 x 15 SCREW (2)

M3 NUT (4)

M3 WASHER (2)

Ⓐ M3 PIVOT BALL (2) (Silver)

Ⓐ GEAR BOX HATCH (1)



7 INSTALLATION OF GEAR BOX

M3 x 45 SCREWS

M3 SPRING WASHERS

Ⓐ REAR PLATE (L)

Tighten M3 x 45 screws flush with Rear Plate (R)

M3 x 8

M3 x 45 SCREW

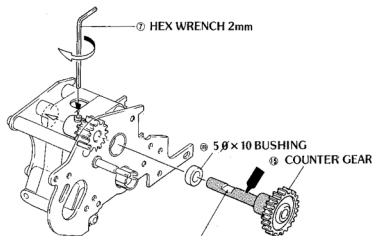
M3 SPRING WASHER

Ⓐ JOINT COLLAR

Ⓐ REAR PLATE (R)

M3 x 8 SCREW

8 INSTALLATION OF FINAL PINION



Affix shaft to pinion with 2mm set screw
Lubricate shaft and carefully apply thread locking compound to lock set screw threads



9 INSTALLATION OF REAR SHOCK STAY

Ⓐ GEAR BOX HATCH

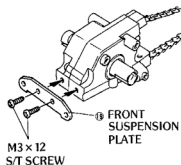
Push in as shown

M3 x 12 S/T SCREWS

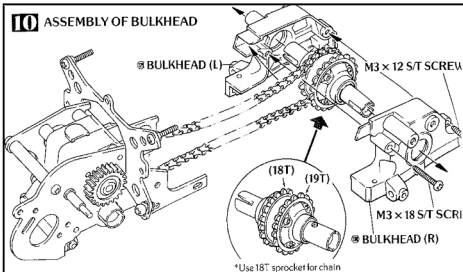
10 ASSEMBLY OF BULKHEAD

- M3 × 12 S/T SCREW (3) 
 M3 × 18 S/T SCREW (1) 



After assembling the bulkhead attach front suspension plate (19) as shown



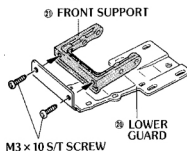
10 ASSEMBLY OF BULKHEAD



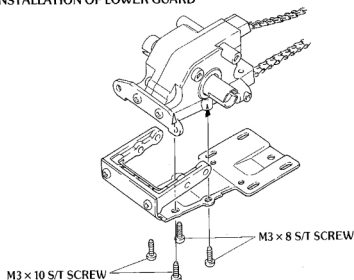
11 INSTALLATION OF LOWER GUARD

- M3 × 10 S/T SCREW (4) 
 M3 × 8 S/T SCREW (2) 

Install Front Support as shown:



11 INSTALLATION OF LOWER GUARD

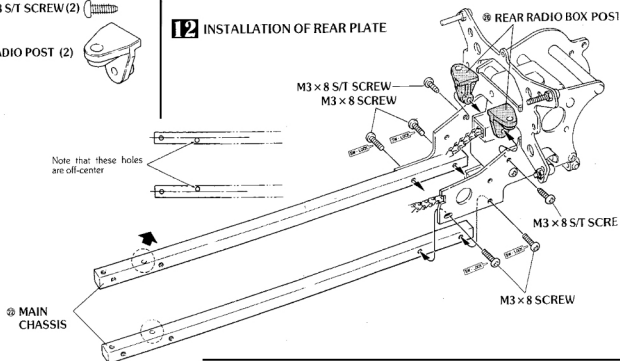


12 INSTALLATION OF REAR PLATE

- M3 × 8 SCREW (4) 
 M3 × 8 S/T SCREW (2) 
 RADIO POST (2) 

12 INSTALLATION OF REAR PLATE

Note that these holes are off-center



13 INSTALLATION OF BULKHEAD

M2.6 x 6 SCREW (2) 

14 INSTALLATION OF FRONT SIDE PLATES

M2.6 x 6 SCREW (4) 


M2.6 x 12 SCREW (2) 


M3 x 8 S/T SCREW (2) 

M3 x 12 S/T SCREW (2) 

M3 x 16 S/T SCREW (2) 

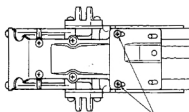
FRONT UPPER PIVOT (L) (1) 

FRONT RADIO BOX POST (R) (1) 

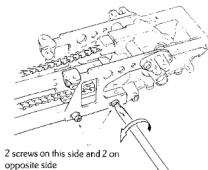
RADIO BOX POST (F) (2) 

BODY SPACER (2) 

15 ADJUSTMENT OF CHAIN



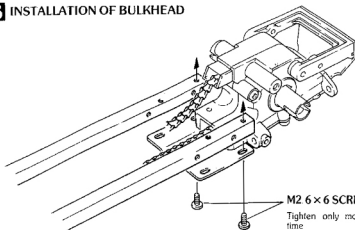
Loosen these 2 screws



2 screws on this side and 2 on opposite side

1. Loosen the 6 screws 1/2 turn as shown in the drawing

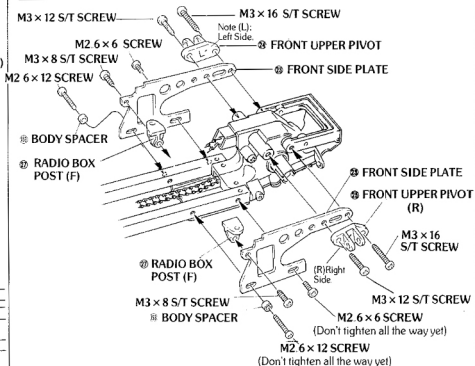
13 INSTALLATION OF BULKHEAD



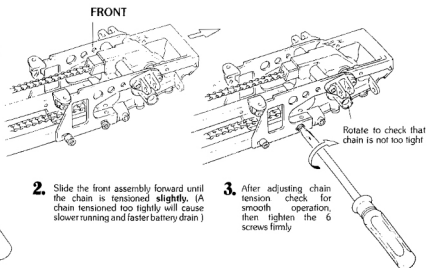
M2.6 x 6 SCREW

Tighten only moderately at this time


14 INSTALLATION OF FRONT SIDE PLATES




15 ADJUSTMENT OF CHAIN



19 INSTALLATION OF FRONT SUSPENSION ARM

M3 x 4 SET SCREW (2) 

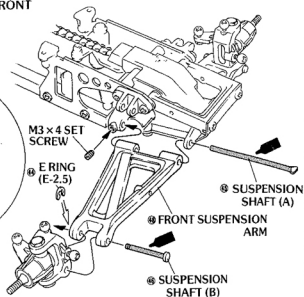
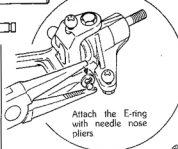
④ E RING (E-2.5) (2) 

④ SUSPENSION SHAFT (A) (2)


④ SUSPENSION SHAFT (B) (2)

19 INSTALLATION OF FRONT SUSPENSION ARM


NOTE! Do not over tighten set screws



20 INSTALLATION OF FRONT UPPER ROD


M3 x 15 SCREW (4) 

M3 NUT (2) 

M3 NYLON NUT (2) 

④ 5.8 BALL (2) 

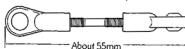
④ BALL END (4) 

④ UPPER ROD (2) 

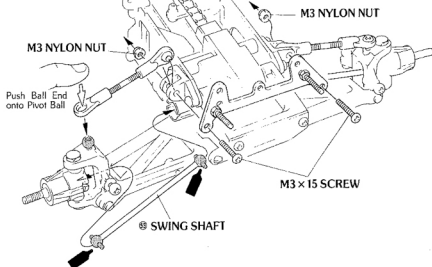
④ BALL END (Large)

④ 5.8 BALL 

④ UPPER ROD

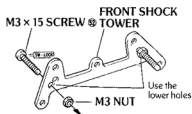


20 INSTALLATION OF FRONT UPPER ROD




21 INSTALLATION OF FRONT SHOCKS

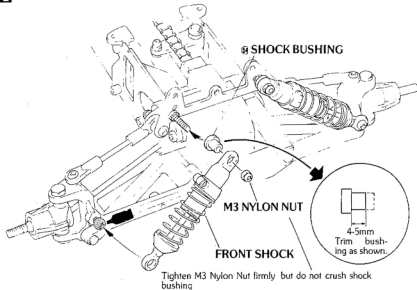
Attach M3 x 15 screws to the front shock stay



21 INSTALLATION OF FRONT SHOCKS

M3 NYLON NUT (2) 

SHOCK BUSHING (Black Rubber) (2) 



22 ASSEMBLY OF TIE RODS

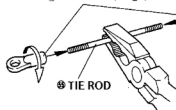
⑨ BALL END (Large) (4)



⑩ TIE ROD (2)

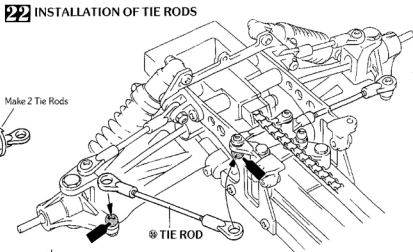


⑨ BALL END (Large)



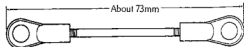
⑩ TIE ROD

Make 2 Tie Rods



⑩ TIE ROD

About 73mm



23 INSTALLATION OF REAR HUB

⑪ PLASTIC BUSHINGS (4)



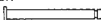
M3 PIVOT BALL (Silver Color) (2)



⑫ E RING (E-2.5) (2)



⑬ SUSPENSION SHAFT (C)



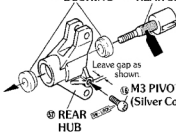
(Long, Black Color) (2)

NOTE! These bushings can be replaced with optional bearings (See page 20 for details)

PLASTIC

⑪ BUSHING

⑬ REAR SHAFT



Leave gap as shown.

⑬ M3 PIVOT BALL (Silver Color)

⑬ REAR HUB

24 INSTALLATION OF REAR SUSPENSION ARM

M3 x 8 SCREW (2)



M3 x 4 SET SCREW (2)



⑭ SUSPENSION SHAFT (Long) (2)

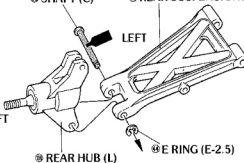


23 INSTALLATION OF REAR HUB SUSPENSION

⑬ SHAFT (C)

⑬ REAR SUSPENSION ARM

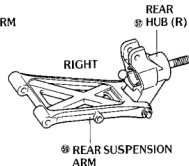
LEFT



⑬ REAR HUB (L)

NOTE: Be sure to assemble both right and left sides

RIGHT



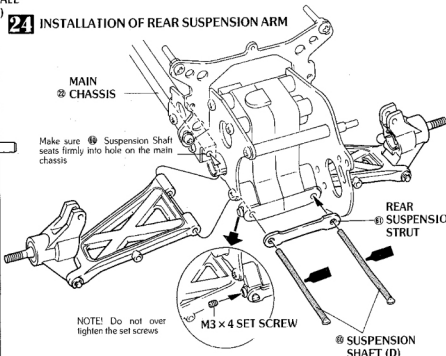
REAR HUB (R)

⑬ REAR SUSPENSION ARM

24 INSTALLATION OF REAR SUSPENSION ARM

MAIN CHASSIS

Make sure ⑭ Suspension Shaft seats firmly into hole on the main chassis



REAR SUSPENSION STRUT

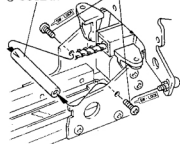
NOTE! Do not over tighten the set screws

M3 x 4 SET SCREW

⑭ SUSPENSION SHAFT (D)

JOINT COLLAR

M3 x 8 SCREW



25 INSTALLATION OF REAR UPPER ROD

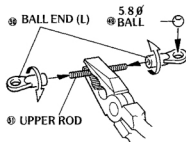
M3 x 10 SCREW (2)

5.8 Ø BALL (2)

BALL END
(Large) (4)

UPPER
ROD (2)

Make two Upper Rods



25 INSTALLATION OF REAR UPPER ROD

M3 x 10 SCREW

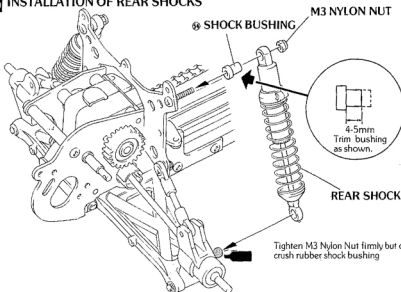
(Ball Inside)

UPPER ROD

SWING SHAFT

First install rod ball, then attach upper rod to the hub with the M3 x 10 screw. Then simultaneously install swing shaft and attach the other end of upper rod as shown

26 INSTALLATION OF REAR SHOCKS



Tighten M3 Nylon Nut firmly but do not crush rubber shock bushing

26 INSTALLATION OF REAR SHOCKS

M3 NUT
(Nylon Threads) (2)

SHOCK
BUSHING (2)

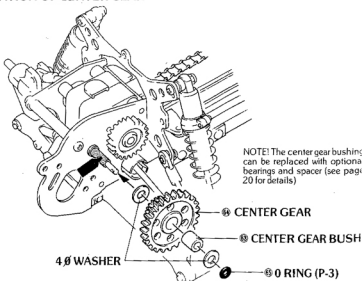
27 INSTALLATION OF CENTER GEAR

27 INSTALLATION OF CENTER GEAR

4 Ø WASHER (2)

CENTER GEAR
BUSHING (1)

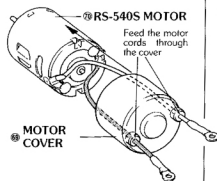
O RING (P-3) (1)
(Black Rubber)



23 INSTALLATION OF MOTOR

M3 x 3 SET SCREW (1)

M3 x 8 SCREW (2)



The kit includes 2 sizes of pinion gears: 12 tooth and 15 tooth. Use low gear (12 tooth) until you gain experience. High gear (15 tooth) will give greater speed.

PINION GEAR (Smaller)



PINION GEAR (Larger)



29 INSTALLATION OF GEAR COVER

HOOK PIN (1)



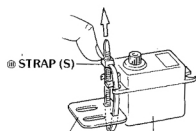
30 INSTALLATION OF SPEED CONTROL SERVO

M3 x 6 S/T SCREW (6)

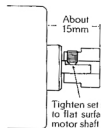
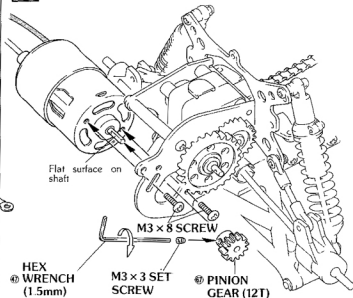
SERVO SPACER (A) (1)

Not needed for mid-size servos

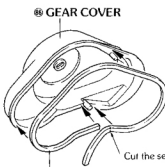
SERVO SPACER (B) (1)



28 INSTALLATION OF MOTOR

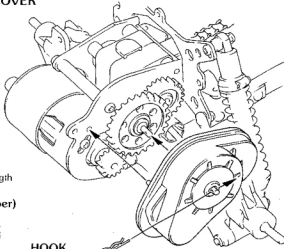


29 INSTALLATION OF GEAR COVER



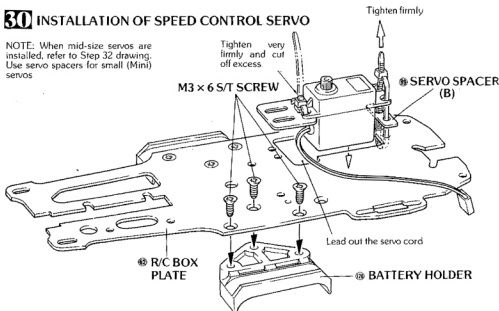
GEAR COVER SEAL (Foam Rubber)

Attach seal to cover with cyanoacrylate adhesive—use only enough adhesive to hold seal



30 INSTALLATION OF SPEED CONTROL SERVO

NOTE: When mid-size servos are installed, refer to Step 32 drawing. Use servo spacers for small (Mini) servos



31 INSTALLATION OF CHAIN GUIDE

M2 x 8 S/T SCREW (2)

CHAIN
GUIDE (D)
(Plastic) (1)



32 MOUNTING RADIO PLATE

M2 x 8 S/T SCREW (2)

M2 x 6 S/T SCREW (4)

M3 x 6 FLAT HEAD S/T SCREW (1)

M3 x 8 S/T SCREW (2)

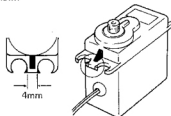
M3 x 10 S/T SCREW (2)

RADIO POST
SCREW (2)

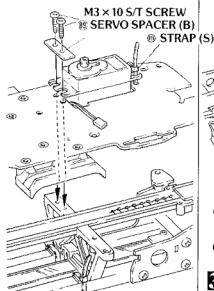


SERVO INSTALLATION

When using some types of servos you may have to trim part of the mounting ears as shown



(2) Mount servo as shown



33 INSTALLATION OF SPEED CONTROL

M2 6 x 6 SCREW (1)

M3 NUT
(Gold Color) (2)

BALL NUT (1)

SPEED CONTROL NUT (1)

SPEED CONTROL CONTACT POINT (2)

SPEED CONTROL PIVOT (1)



31 INSTALLATION OF CHAIN GUIDE

Bend the chain guide (A) as shown and install front end first

M2 x 8 S/T SCREW

CHAIN GUIDE (D)

TAB

Note Tab

Bind with STRAP (Small)

NOTE: To protect chain from contamination by dirt and dust, caulk between chain guide and cover with silicone caulk or similar sealant

RADIO POST SCREW

32 MOUNTING RADIO PLATE

M3 x 8 S/T SCREW

M2 6 x 8 S/T SCREW

M3 x 10 S/T SCREW

M3 x 6 F.H. S/T SCREW

M2 x 8 S/T SCREW

RADIO POST SCREW

FRONT STRAP PLATE

FLAT

SERVO MOUNT

RADIO PLATE SUPPORT

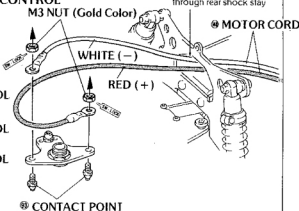
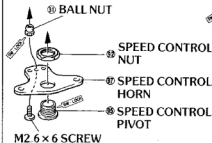
Bottom View

- Insert (11B) support holding diagonally then, Rotate the support into the upright position
- Set support into upright position

If fit is too tight bevel corners

33 INSTALLATION OF SPEED CONTROL

Arrange motor cords through rear shock stay



33 WIRING OF RECEIVER BATTERY

NOTE: If your radio is BEC EQUIPPED refer to Page 19

- ① Cut off wires from radio box as shown then join wires by twisting together
- ② Insulate with vinyl tape to avoid short circuits

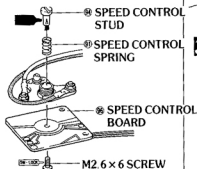


Soldering is strongly recommended

NOTE: The colors of the lead wires are different depending upon radio manufacturer. Most use red for positive (+) and black for negative (-). The exception being Cox and Airtronics (Sanwa) Their (+) lead has a white stripe and the middle lead is (-)

35 INSTALLATION OF SPEED CONTROL PC BOARD

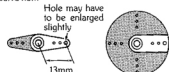
- M2.6 x 6 SCREW (1)
- M3 x 10 SCREW (Gold Color) (2)
- M3 NUT (Gold Color) (3)
- ④ SPEED CONTROL SPRING (1)
- ④ SPEED CONTROL STUD (1)
- ④ DRIVER POST (1)



36 SPEED CONTROL LINKAGE

- ④ BALL END (Small) (1)
- ④ SERVO ROD (1)

NOTE: Trim the shaded portion from your servo horn



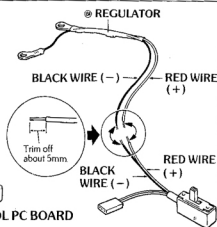
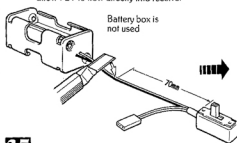
Install ball end onto ④ servo rod

- BALL END ④ (Small)

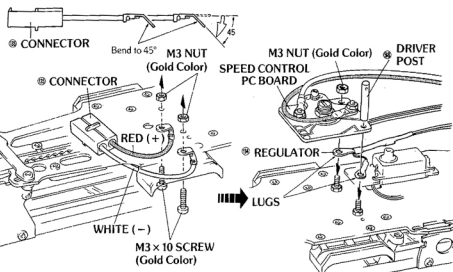


34 WIRING OF RECEIVER BATTERY

NOTE: The battery that powers the motor also powers the receiver. Use great care and do not allow polarity to be reversed. Also, do not allow 7.2V to flow directly into receiver

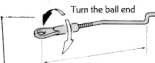
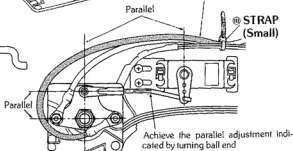
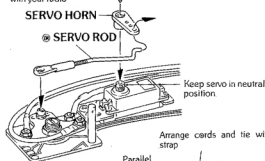


35 INSTALLATION OF SPEED CONTROL PC BOARD



36 SPEED CONTROL LINKAGE

Use the screw included with your radio



It become shorter, getting longer

NEUTRAL



LOW SPEED



MEDIUM SPEED



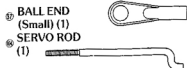
HIGH SPEED



Br BRAKE



37 STEERING CONTROL LINKAGE

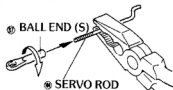


Cut off shaded portion of servo horns included with radio system

Hole may have to be enlarged slightly

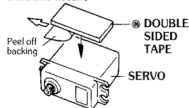


ASSEMBLY OF STEERING ROD



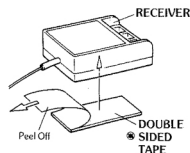
AFFIXING DOUBLE-SIDED TAPE

Cut double-sided tape to the size of the servo and affix to the servo



38 INSTALLATION OF RECEIVER, RESISTOR AND ANTENNA

M2 6 WASHER (Black) (2)



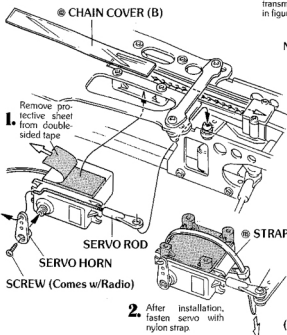
39 INSTALLATION OF FRONT BUMPER

M3 x 12 S/T SCREW (2)

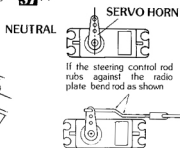
M4 x 8 SCREW (1)

M4 FLANGED NUT (1)

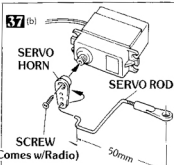
37 STEERING CONTROL LINKAGE



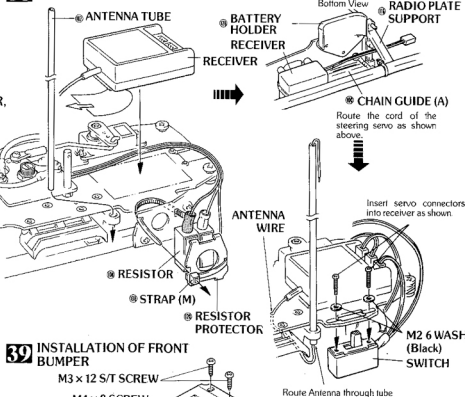
NOTE: For steering, use a reverse servo. Your radio may employ servo reversing, or you will need to reverse the position of the gimbal stick on your transmitter or use the alternate servo rod as shown in figure 37 (b)



If the steering control rod rubs against the radio plate bend rod as shown



38 INSTALLATION OF RECEIVER, RESISTOR AND ANTENNA



39 INSTALLATION OF FRONT BUMPER

M3 x 12 S/T SCREW

M4 x 8 SCREW

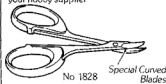
FRONT BUMPER

M4 FLANGED NUT

41 CUTTING OUT WING AND DRIVER

KYOSHO®

We offer special Lexan Scissors that make trimming bodies a breeze. See your hobby supplier



42 PAINTING WING AND DRIVER

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 masking a portion with tape then removing the tape and painting. Apply the lightest color last.

Apply decals to the outside of the body.

KYOSHO®



Micro-Line tape enhances the appearance of any model.

No. 1841-3

KYOSHO®

Polyca Color Paint is available for painting your Lexan Bodies. 12 great looking colors!

No. 2230

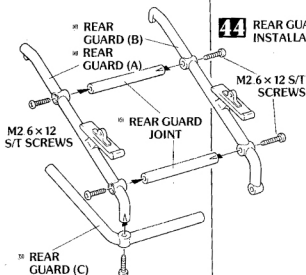


43 ROLL BAR

M3 x 6 SCREW (2)

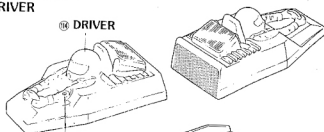
44 REAR GUARD

M2.6 x 12 SCREW (7)



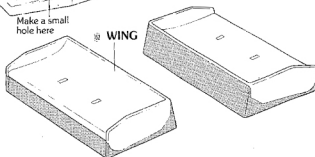
41 CUTTING OUT WING AND DRIVER

DRIVER

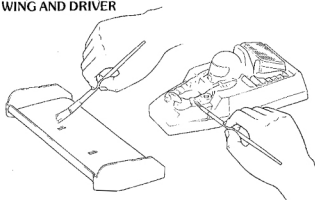


Make a small hole here

WING



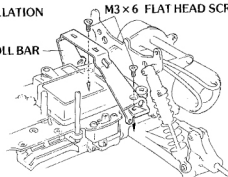
42 PAINTING WING AND DRIVER



43 ROLL BAR INSTALLATION

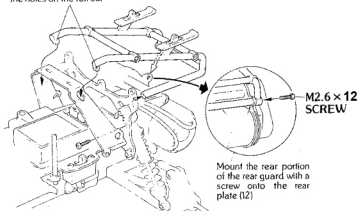
M3 x 6 FLAT HEAD SCREW

ROLL BAR



44 REAR GUARD INSTALLATION

Slide projecting stubs into the holes on the roll bar



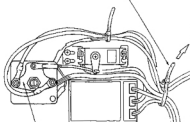
Mount the rear portion of the rear guard with a screw onto the rear plate (12)

45 MOUNTING OF DRIVER

⑥ HOOK PIN (1)



⑩ STRAP (S)



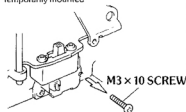
Leave some slack in the wires since the speed controller will swing right and left

46 INSTALLATION OF SIDE GUARD

M3 × 8 SCREWS (2)

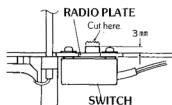


Remove the M3 × 10 screw that had been temporarily mounted



This screw will be used for mounting the side guard

NOTE: Depending on the radio being installed, the switch lever may need to be trimmed to fit under the roll cage



47 ASSEMBLY OF BODY

M2 6 × 6 SCREW (6)



M2 6 × 12 SCREW (6)

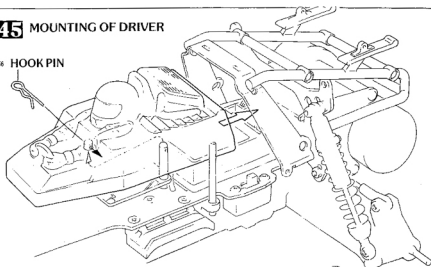


FRONT PLATE



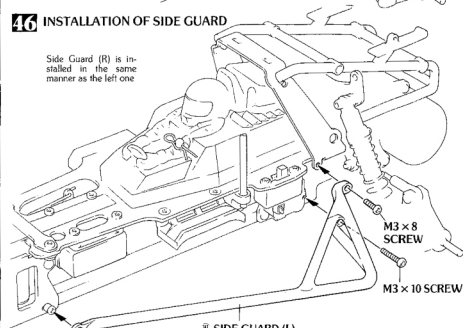
45 MOUNTING OF DRIVER

⑥ HOOK PIN



46 INSTALLATION OF SIDE GUARD

Side Guard (R) is installed in the same manner as the left one



Push the guard over the head of the screw until it pops on

⑧ SIDE GUARD (L)

M2 6 × 6 S/T SCREW

47 ASSEMBLY OF BODY

⑨ SIDE CAGE (R)

⑩ ROLL CAGE

⑪ DRIVER PLATE

⑫ ROLL CAGE (L)

M2 6 × 12 S/T SCREW

M2 6 × 12 S/T SCREW

M2 6 × 12 S/T SCREWS

M2 6 × 12 S/T SCREWS

ROLL CAGE JOINT

⑬ SIDE CAGE (L)

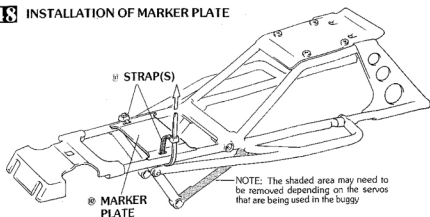
M2 6 × 6 ST SCREW

M2 6 × 12 S/T SCREW

48 INSTALLATION OF MARKER PLATE

Use the small nylon straps to secure the marker plate between the roll cage sides

48 INSTALLATION OF MARKER PLATE



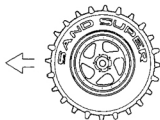
49 INSTALLATION OF TIRE

M4 NYLON NUTS (4)

DRIVE WASHERS (4)

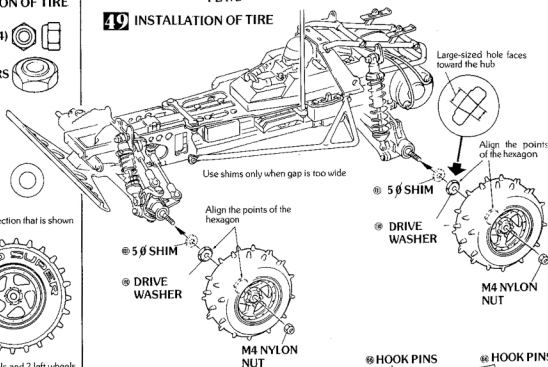
5 Ø SHIMS (4)

Mount the wheels in the direction that is shown



Note there are 2 right wheels and 2 left wheels

49 INSTALLATION OF TIRE



50 MOUNTING OF BODY

1 Put the cage over the chassis

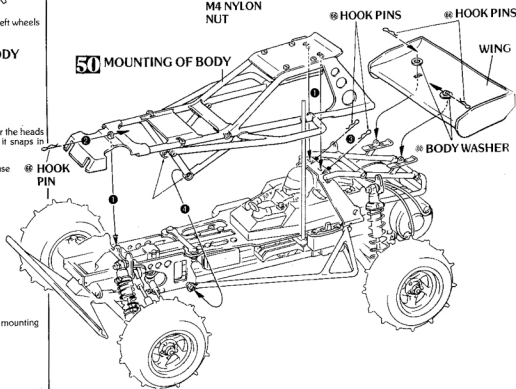
2 Fit the Front Hook Pin

3 Fit the Rear Hook Pins

4 Push the front cage holes over the heads of the M2.6 x 12 screws until it snaps in place

Note when removing the cage use the reverse order of installation

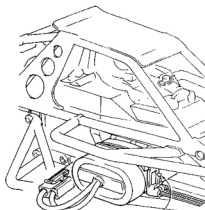
50 MOUNTING OF BODY



HOOK PIN (5)

Spread roll cage apart to allow for mounting

51 MOUNTING OF BATTERY



You can release strap tension by pushing here.

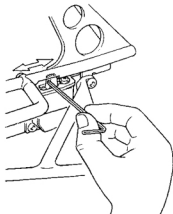
KYOSHO



Use a high performance battery. The Kyosho 7.2V Racing Battery is recommended.

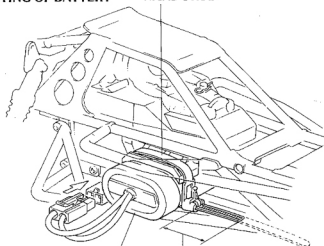
No. 2218B

Since the switch for the radio is well protected under the roll cage, an allen wrench or similar type tool will be used to turn the switch on-off.



51 MOUNTING OF BATTERY

NICAD STRAP



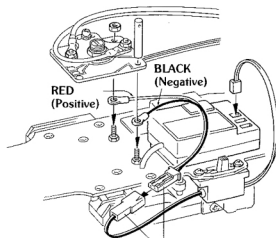
NICAD BATTERY
(Not Included)

Leave approximately 40mm of adjustment then cut off the rest

52 IF YOUR RADIO IS BEC EQUIPPED



If your radio has this mark, the Javelin can take advantage of it!



BEC CONNECTOR

(Supplied with your radio system)

NOTE! When installing a BEC Connector, pay close attention to the Positive (Red) and Negative (Black) wires. Improper polarity (even for an instant) may damage your radio permanently.



EXPLODED VIEW OF FRONT AND REAR DIFFERENTIAL

⊗ SPROCKET (A)

BEVEL
⊗ GEAR (B)

⊗ BEVEL SHAFT

⊗ BEVEL
GEAR (B)

⊗ BEVEL
GEAR (A)

⊗ SPROCKET (B)

M2 x 8 S/T SCREW

⊗ MAIN GEAR

BEVEL
⊗ GEAR (B)

⊗ BEVEL SHAFT

⊗ BEVEL
GEAR (B)

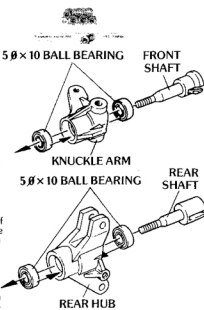
⊗ BEVEL
GEAR (A)

⊗ SPROCKET (C)

M2 x 8 S/T SCREW

OPTIONAL BALL BEARINGS

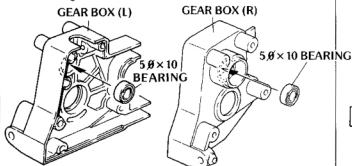
The single most important improvement you can make to your Javelin are ball bearings. They increase performance and reduce maintenance. Kyosho sells a complete set of optional ball bearings for your Javelin (#H-001). It contains ten 5 \times 10 and two 4 \times 8 high quality bearings. We also offer the bearings in pairs! The #1901 contains two 5 \times 10 (5 pairs required) and the #1903 has two 4 \times 8 (1 pair required).



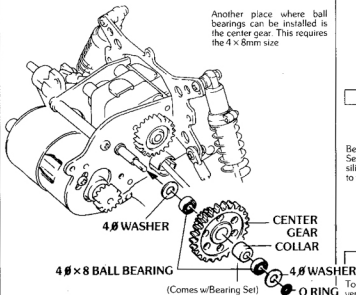
NOTE: The 1mm plastic shim around the #1901 5 \times 10mm bearings will need to be removed before installation.

Install two pair of 5 \times 10mm size in the front and rear as shown.

Two more 5 \times 10mm bearings may be installed in the gear box.

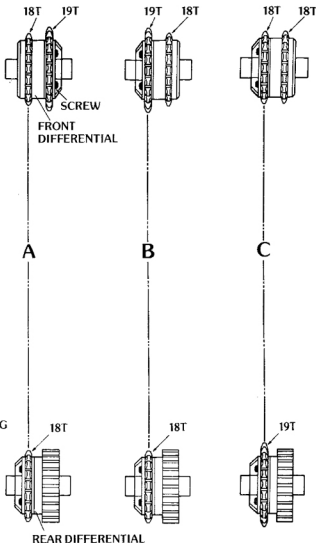


Another place where ball bearings can be installed is the center gear. This requires the 4 \times 8mm size.



ADJUSTING FRONT/REAR POWER RATIO

By changing the front and rear sprockets you can change the power ratio.



- A Normal: Front and rear turn at same rate
- B Rear wheels have slightly more power
- C Front wheels have slightly more power

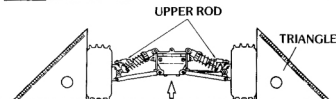
KEEPING THE CHAIN CLEAN

Be careful not to let sand and dust in through the chain cover and chain guide. Seal the openings around the chain cover and guide with cellophane tape or silicone sealer. Remove the gearbox hatch cover and hold the car upside down to remove any dirt.

REPLACING THE CHAIN

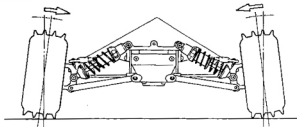
To replace the chain, remove the chain cover (B); and holding the model vertically with the front upward, feed the chain from the front sprocket to the rear. It may require a few tries to get it right.

FRONT CAMBER ADJUSTMENT

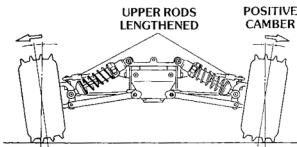


Place the car on a flat surface with the chassis raised as high as possible and adjust the length of the front and rear upper rods in a way so that the tires stand at a right angle to the ground.

NOTE: EVERY TIME YOU SHIFT THE HEIGHT OF THE CHASSIS, DO THE SAME ADJUSTMENT. REFERRING TO PAGE 22 OF THE ASSEMBLY INSTRUCTION

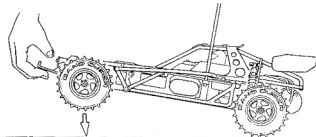


Negative camber results when you make the upper rods shorter

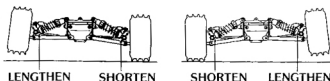


Positive camber results when you make the upper rods longer

FRONT WHEEL HEIGHT



Place the car on a flat area, raise the front end and then lower the front wheels slowly to see whether they will touch the ground evenly. If not, adjust the length of the shocks. If they are uneven, steering to the right and left will not be the same.

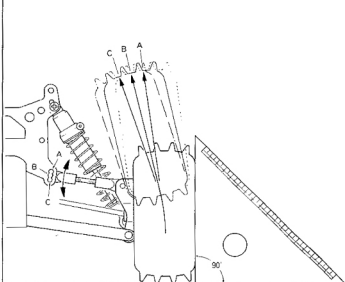


Adjust the length by turning the shock end



SHOCK END

REAR CAMBER ADJUSTMENT



You can alter the rear wheel camber by shifting the bolt hole location of the upper rod. Hole "A" provides more positive camber while hole "C" provides more negative camber. The middle hole "B" should be used normally.

CUSTOMIZING THE TIRES

You can increase performance for various track conditions by trimming the knobs of the tires. Consult the chart below.

TRIM THE KNOBS



Track	Amount to Trim
Grass	1/2
Concrete	2/3
Sand	NONE
Hard Dirt	1/3
Soft Dirt	NONE



OPTIONAL TIRES

If you need even more traction on soft surfaces, try Kyosho #SC-84 special tires.

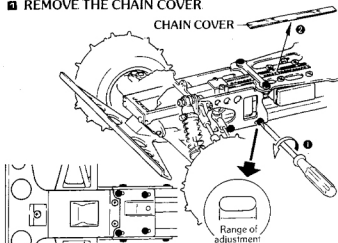
GEAR RATIOS AND OPTIONAL MOTORS

Pinion Gear	12T	13T	14T	15T	16T	17T
Gear Ratio	10.3	9.5	8.8	8.2	7.7	7.3
Motor	LeMans 240S		RS-540S			
	LeMans 360PT/ST					
	LeMans 480 Gold					

ADJUSTING THE CHAIN

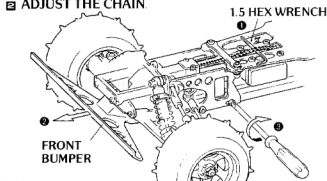
To avoid any damage to sprockets adjust the tension of the chain every 5-6 runs

1 REMOVE THE CHAIN COVER



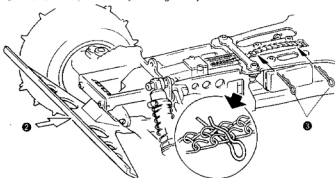
- 1 Loosen 10 (darkened) screws 1/2 turn each
- 2 Remove the chain cover

2 ADJUST THE CHAIN

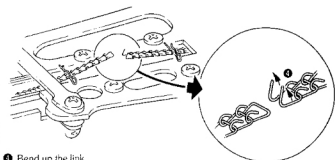


- 1 Insert a 1.5mm hex wrench under chain as shown
- 2 Pull bumper forward
- 3 Keep tension on bumper and tighten the 10 screws firmly

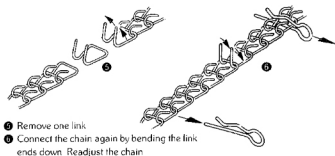
- When chain is stretched beyond range of adjustment:



- 1 Loosen the 10 screws
- 2 Push bumper rearward to loosen chain fully
- 3 Hold the chain with hook pins as shown in inset drawing



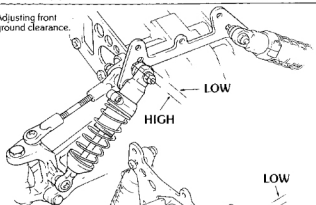
- 1 Bend up the link



- 2 Remove one link
- 3 Connect the chain again by bending the link ends down. Readjust the chain

ADJUSTMENT OF GROUND CLEARANCE

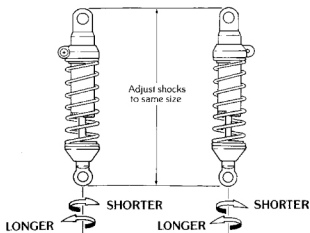
- (1) Adjusting front ground clearance:



- (2) Adjusting rear ground clearance:



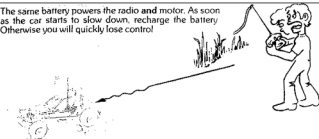
ADJUSTMENT OF SHOCK SIZE



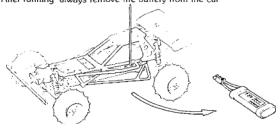
Adjust the shocks so that both front shocks and both rear shocks are exactly the same length

RUNNING THE JAVELIN

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



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 jamming from other radios.

SUGGESTED FURTHER 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.

CHECK BEFORE EVERY RUN

Check to see if all bolts and nuts are tightened firmly

Check to see Ni-cad 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.

KEY NUMBERS FOR PARTS

No	Parts Name	Q'ty	No	Parts Name	Q'ty	No	Parts Name	Q'ty	No	Parts Name	Q'ty
(1) Tire		4	40	Knuckle Arm (R)	1	79	Spring Stopper	4	116	M2 Pivot Ball	4
(2) Wheel Pk (1)		4	41	Front Shaft	2	80	Shock Washer	4	117	5/8 x 10 Bushing	2
(3) Wheel Pk (2)		4	42	Front Hub (L)	1	81	Shock O Ring	4	118	Resistor Protector	1
(4) Wheel Pk (3)		4	43	Front Hub (R)	1	82	Shock Stopper	4	119	Main Gear	1
(5) 8/8 x14 Bearing		4	44	E Ring (E-2.5)	4	83	Spring Receptacle	4	120	Sprocket (A)	1
(6) Joint		4	45	Suspension Shaft (A)	2	84	Shock End	4	121	Sprocket (B)	1
(7) Hex Wrench (2mm)		1	46	Suspension Shaft (B)	2	85	Joint Collar	2	122	Sprocket (C)	1
(8) Plastic Bushing		8	47	Hex Wrench (1.5mm)	1	86	Gear Cover	1	123	Bevel Gear (A)	4
(9) Gear Box (L)		1	48	Front Suspension Arm	2	87	Gear Cover Seal	1	124	Bevel Gear (B)	4
(10) Final Pinion		1	49	5/8 Ball	4	88	Servo Spacer (A)	1	125	Bevel Shaft	2
(11) Gear Box (R)		1	50	Ball End (Large)	12	89	Servo Spacer (B)	1	126	Battery Holder	2
(12) Center Gear Shaft		1	51	Upper Rod	4	90	Servo Mount	1	127	Bulk Head (L)	1
(13) Rear Plate (R)		1	52	Front Shock Stay	1	91	Speed Control Spring	1	128	Bulk Head (R)	1
(14) Rear Plate (L)		1	53	Swing Shaft	4	92	Speed Control Nut	1	129	5/8 Shim	4
(15) Counter Gear		1	54	Shock Bushing	4	93	Speed Ctrl. Con. Pnt	2	130	Body Washer	2
(16) M3 Pivot Ball		8	55	Tie Rod	2	94	Speed Ctrl. Hold Metal	1	131	Decal	1
(17) Rear Shock Stay		1	56	Rear Shaft	2	95	Speed Control Pivot	1	132	Regulator	1
(18) Gear Box Hatch		1	57	Rear Hub (R)	1	96	Speed Control PC Board	1	133	Connector	1
(19) Front Suspension Plate		1	58	Suspension Shaft (C)	2	97	Speed Control Horn	1	134	Silicon Grease	1
(20) Lower Guard		1	59	Rear Suspension Arm	2	98	Driver Post	1	135	Shock Wrench	1
(21) Front Support		1	60	Suspension Shaft (D)	2	99	Chain Cover (A)	1	136	Strap (Medium)	1
(22) Main Chassis		2	61	Rear Suspension Strut	1	100	Chain Guide (A)	1	137	Rear Hub (L)	1
(23) Front Side Plate		2	62	Radio Plate	1	101	Chain Guide (D)	1	138	Motor Cord	1
(24) Front Upper Pivot (L)		1	63	Center Gear Bushing	1	102	Chain Cover (B)	1	139	Driver Plate	1
(25) Front Upper Pivot (R)		1	64	Center Gear	1	103	Front Strap Plate	1	140	Marker Plate	1
(26) Radio Post (R)		2	65	O Ring	1	104	Servo Rod	2	141	Side Guard (L/R)	1 Set
(27) Radio Post (F)		2	66	Hook Pin	4	105	Servo Saver Spacer	1	142	Front Plate	1
(28) Chain Guide (B)		1	67	Pinion Gear (12T)	1	106	Double Sided Tape	1	143	Roll Cage	1 Set
(29) Chain Guide (C)		1	68	Pinion Gear (15T)	1	107	Antenna Tube	1	144	Side Cage	2
(30) Chain		1	69	Motor Cover	1	108	Resistor	2	145	Roll Cage Joint	1
(31) Ball Nut		4	70	RS-540S Motor	1	109	Front Bumper	1	146	Rear Guard (A)	1
(32) Saver Shaft (A)		1	71	Shock Seal	4	110	Drive Washer	4	147	Rear Guard (B)	1
(33) Saver Shaft (B)		1	72	Shock Oil	1	111	Strap (Small)	6	148	Rear Guard (C)	1
(34) Servo Saver (A)	1 Set		73	Front Shock Case	2	112	Ni-Cad Strap	2	149	Rear Guard Joint	2
(35) Servo Saver (B)		1	74	Rear Shock Case	2	113	Steering Rod	1	150	Wing	1
(36) M2 Shaft		1	75	Front Shock Piston	2	114	Driver	1	151	Body Spacer	2
(37) Ball End (Small)		4	76	Rear Shock Piston	2	115	Strap (Large)	1	152	Roll Bar	1
(38) King Pin		4	77	Front Spring	2	116	Radio Plate Support	1			
(39) Knuckle Arm (L)		1	78	Rear Spring	2	117	Radio Post Screw	2			

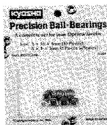
PURCHASING PARTS FOR YOUR KIT

You can purchase replacement and optional parts for your kit. All of the parts identified by key numbers (see above) 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 Numbers**. For instance, if you need a Center Gear Shaft (Key #12) ask your dealer for **Kyosho Part Pack # OT-7 (Rear Plate Set)**

Parts Pack #	Description	Key Numbers	Parts Pack #	Description	Key Numbers
OT-01	Gear Box	9 11 129 130 x1	OT-60	Decal	133 x 1
OT-02	Chain	30 x 1	OT-61	Screw Set w/Wrenches	Screw, Nut, Wrench Set
OT-04	King Pin	38 x 4	OT-62	Wheels - 4	2 3 4 x 4
OT-05	Joint - 2	6 x 2	OT-63	Body Set	141 142 144 147 148 149 150 154 x 111 143 145 146 151 153 x 2 w/Screw
OT-06	Swing Shaft - 2	53 x 2	SC-040	Motor Cover	69 x 1
OT-07	Rear Suspension Plate Set	12 13 14 x1 85 x 2	SC-046	Tape (2 Sided)	106 x 1
OT-08	Front Side Plate Set	23 x 2	SC-067	Speed Control w/o Resist	91 92 94 95 96 97 x1 93 x 2
OT-10	Bushing Set	63 x1 119 x 2 8 x 10	SC-078	Speed Control PC Board	96 x 1
OT-11	Suspension Shaft - 4	45 46 58 60 x 2	SC-079	Speed Control Contacts - 2	93 x 2
OT-12	Radio Plate	62 x 1	SC-105	Speed Control Resistors - 2	108 x 1
OT-13	Suspension Arm Set - 4	48 59 x 2	EF-026E	Connector	135 x 1
OT-14	Lower Guard	20 x 1	SC-089	Tie Rod Set	55 x 2 50 118 x 4
OT-15	Bumper	109 x 1	SC-101	Rear Shaft Shim - 10	131 x 10
OT-16	Knuckle Arm (R&L)	39 40 x 1	EF-037	Strap - 6 (3/32 x 2)	111 x 6
OT-17	Shaft - 2 (Front)	41 x 2	EF-038	Strap - 6 (1/4 x 12)	115 x 6
OT-18	Shaft - 2 (Rear)	56 x 2	EF-039	Strap - 6 (3/16 x 8)	112 x 6
OT-19	Drive Washer - 4	110 x 4	EP-22	Body Hook Pins - 5	66 x 5
OT-20	Main Chassis	22 x 2	LD-76	Shock Rubber Bushing - 10	54 x 10
OT-22	Body Washer - 10	132 x 10	SD-79	Antenna Set	107 x 5
OT-23	Pinion Gear (12T)	67 x 1	1911	Ball Bearing - 2 (8 x 14 x 4)	5 x 2
OT-24	Pinion Gear (15T)	68 x 1	AB-30	Front Shock Set - 2	49 54 71 74 75 77 79 80 81 82 83 84 x2 137 x 1
OT-27	Sprocket Gear Set	15 64 121 122 123 124 x1	OPTIONAL PARTS		
OT-28	Differential Gear Set	127 x 2 125 126 x 4			
OT-29	O-Ring - 10	65 x 10	OT-50	Pinion Gear (13T)	Gear Ratio (9.56 : 1)
OT-30	Tires - 2	1 x 2	OT-51	Pinion Gear (14T)	Gear Ratio (8.87 : 1)
OT-31	Pivot Ball - 10 (3MM)	16 x 10	OT-52	Pinion Gear (16T)	Gear Ratio (7.76 : 1)
OT-32	Ball - 10 (5.8MM)	49 x 10	OT-53	Pinion Gear (17T)	Gear Ratio (7.31 : 1)
OT-33	Ball Receptacle - 10 (2.6)	31 x 10	OT-54	Stabilizer Set (F&R)	Front & Rear Stabilizer Set
OT-34	Plate Set	19 61 88 89 103 105 120 x1	OT-56	Screw Set (Lt. Weight)	Tapping (Aluminum), Nylon Nut Set
OT-35	Upper Rod Set	36 x1 104 x 2 37 51 x 4 50 x 8	SC-080	Speed Control Resistors - 3	4 Forward Speeds
OT-36	Pivot Ball - 10 (2.6MM)	118 x 10	H-001	Ball Bearing Set Complete	Ten 5mm & Two 4mm Bearings
OT-37	Cord Set	134 x1 140 x1 Set	1901	Ball Bearing - 2 (5 x 10 x 4)	2 Pcs.
OT-38	Silicon Grease - 2	136 x 2	1903	Ball Bearing - 2 (4 x 8 x 3)	2 Pcs.
OT-39	E-Ring - 10 (#-2.5)	44 x 10	1951	Shock Oil Set - 3 (S-M-H)	Soft, Medium, Hard 60cc x3
OT-40	Strap - 6	138 x 6	OT-47	Hub Set (Low Caster)	Front Hub Set (Low Caster)
OT-41	Final Pinion	10 x 1	1846	Multi-Charger	Good quality, fast.
OT-42	Servo Saver Set	32 33 35 x1 34 x1 Set	1848	Auto Charger	Excellent. Kyosho's Best.
OT-43	Shocks - 2 (Rear)	137 x1 49 54 71 74 76 78 79 80 81 82 83 84 x 2	1891	Motor - LeMans 480S	24,500 RPM Ball Bearing
OT-45	Hub (Rear)	57 139 x 1	1892	Motor - LeMans 480T	23,600 RPM Ball Bearing
OT-46	Chain Guide Set	28 99 100 102 x 1	1893	Motor - LeMans 240S	28,000 RPM Ball Bearing
OT-55	Hub Set (Front - Std)	24 25 42 43 x 1	1894	Motor - LeMans 600 E	18,500 RPM Plain Bearing
OT-48	Battery Holder Set	18 29 101 x1 26 27 128 x 2	1895	Motor - LeMans 360PT	23,500 RPM Ball Bearing
OT-49	Gear Cover Set	21 86 87 90 116 x 1	1897	Motor - LeMans 480G	23,600 RPM Ball Bearing
OT-57	Shock Stay	17 52 x 1	1898	Motor - LeMans 360ST	22,000 RPM Plain Bearing
OT-58	Wing	152 x 1	2218B	Battery 6N-1200S-Nicad	Matched cells, perfect for Javelin
OT-59	Driver	98 114 x 1			



LeMans
Motors



Ball
Bearing Set



Pinion
Gear

Auto Charger



Shock Oil
Set



Battery

