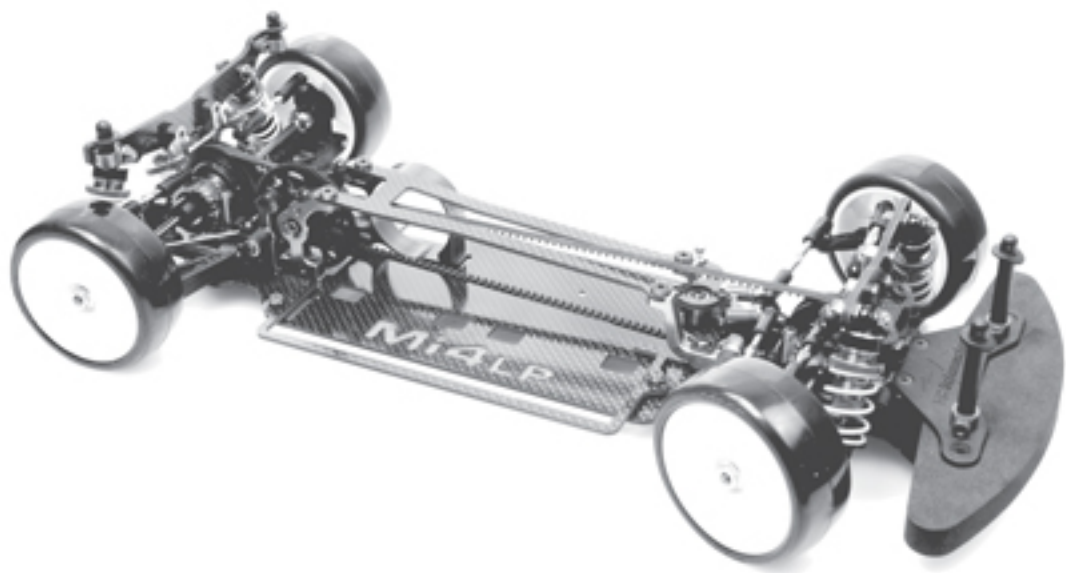


MIALP

Instruction Manual v.1.0



CompetitionX

A WEBSITE FOR THE SERIOUS RACER

Schumacher Racing
73 Tenler Road
Moulton Park
Northampton
NN3 6AX
ENGLAND

Schumacher
racing-cars.com

Schumacher USA, Inc.
6302 Benjamin Road
Suite 404
Tampa
Florida 33634
U.S.A.

Additional Items Required

Transmitter, receiver and servo

(including AA batteries for RC)



Electronic Speed Control



Battery Pack



Battery Tape



Motor



Pinion Gear

Battery Charger



Bodyshell & Paint



Wheels & Tyres



Tools

Wihro Wilha Precision
Circlip Pliers



CR044 Curved Body Scissors



ED01007 Hex Driver 1.5 x 100mm
ED01010 Hex Driver 3.0 x 100mm
ED01005 Hex Driver 3.5 x 100mm



ED05005 Nut Driver 5.5 x 100mm
ED05010 Nut Driver 7.0 x 100mm



Turnbuckle Wrench 4mm ED070007



UW01 - Solder

WORLD
Schumacher Racing stocks and distributes the following manufacturers products and full product listings are available on our website at www.racing-cars.com.

PLEASE NOTE THAT SOME OF THE PRODUCT RANGES BELOW ARE ONLY AVAILABLE IN THE UNITED KINGDOM.

CORE-RC
COM

NISRAM

Speed
In'Stion
R/C Technology Revolution

GM

Wihro

East Coast
BodiesTune

SUPER
SOX

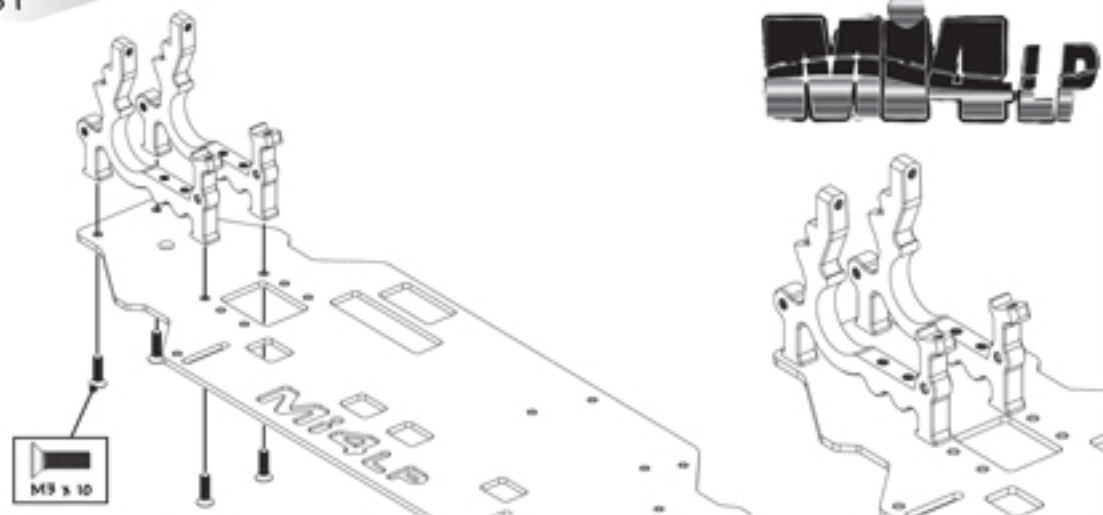
EDS
Specialised R/C Tools

IMPORTANT SAFETY NOTES

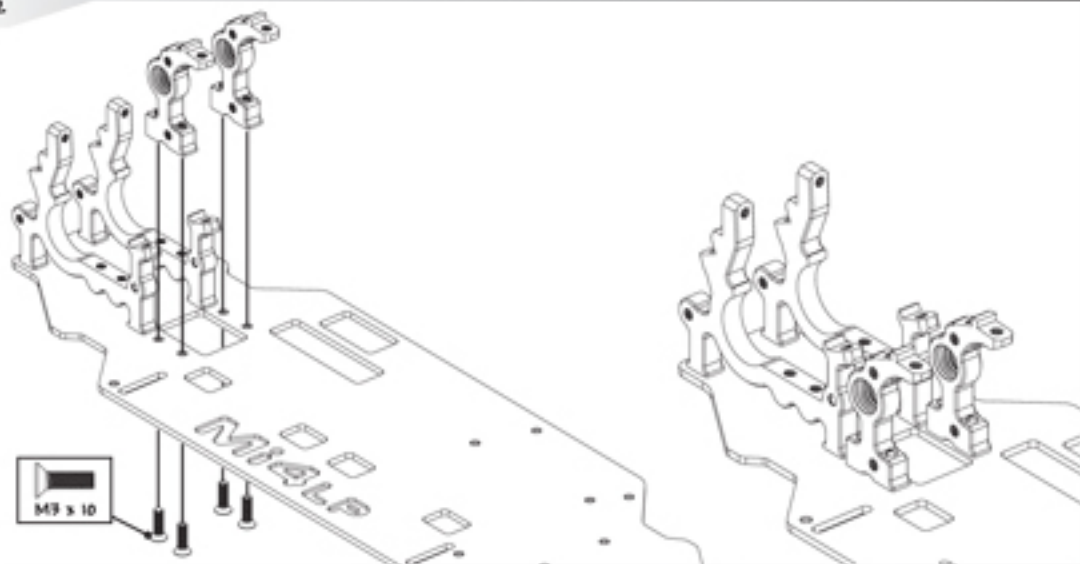
- This product is not suitable for children under the age of 14, without the direct supervision of an adult.
- Select an area for assembly that is away from the reach of small children. The parts in this kit are small and can be swallowed by children causing choking and possible internal injuries.
- Exercise care when using hand tools and sharp instruments during assembly.
- Carefully read all manufacturers warnings and cautions for any additional parts used in the construction.
- In line with our policy of continuous development the exact details of the kit may vary.

Step 1

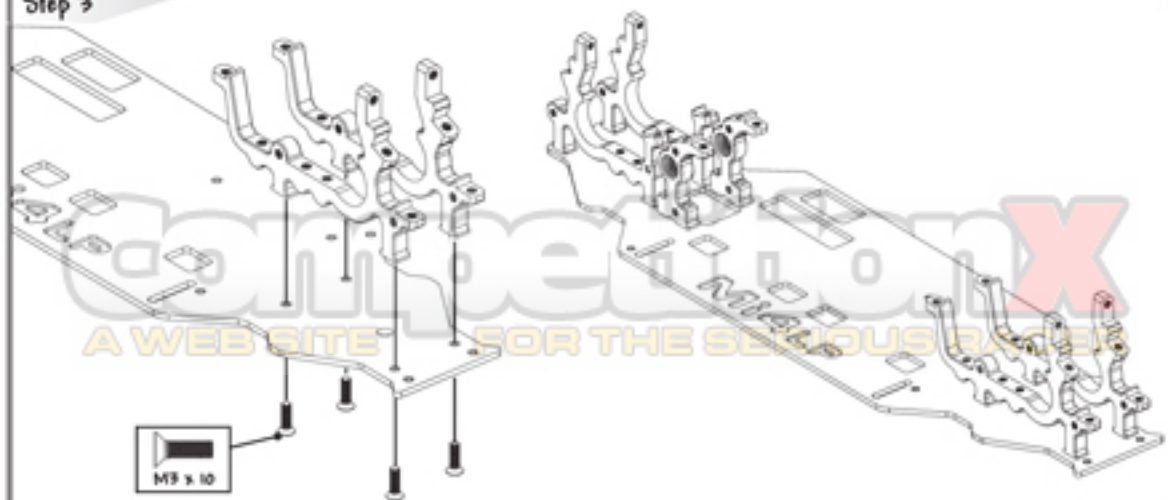
MiSLP



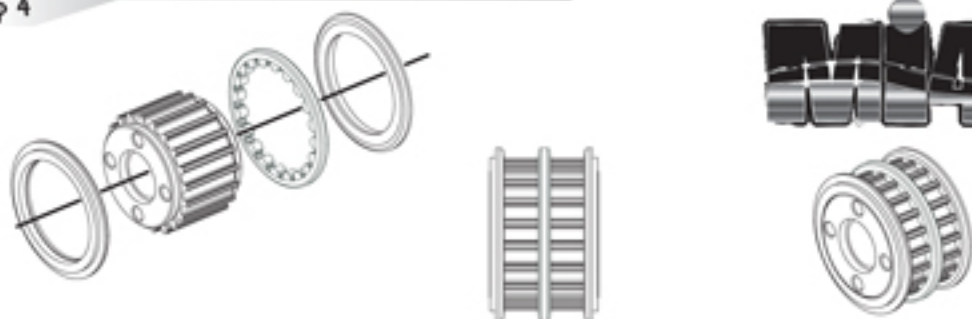
Step 2



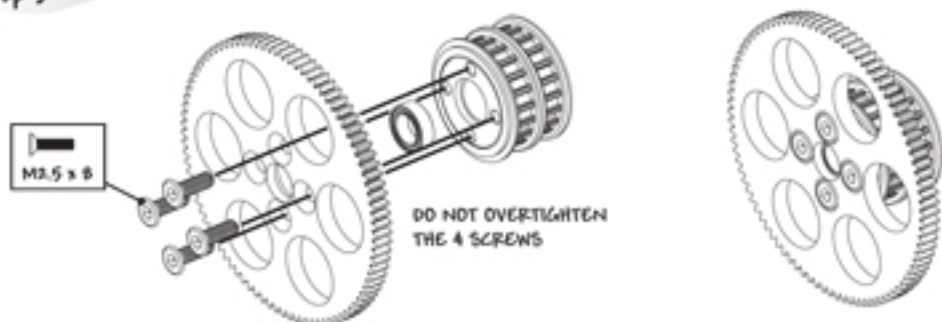
Step 3



Step 4



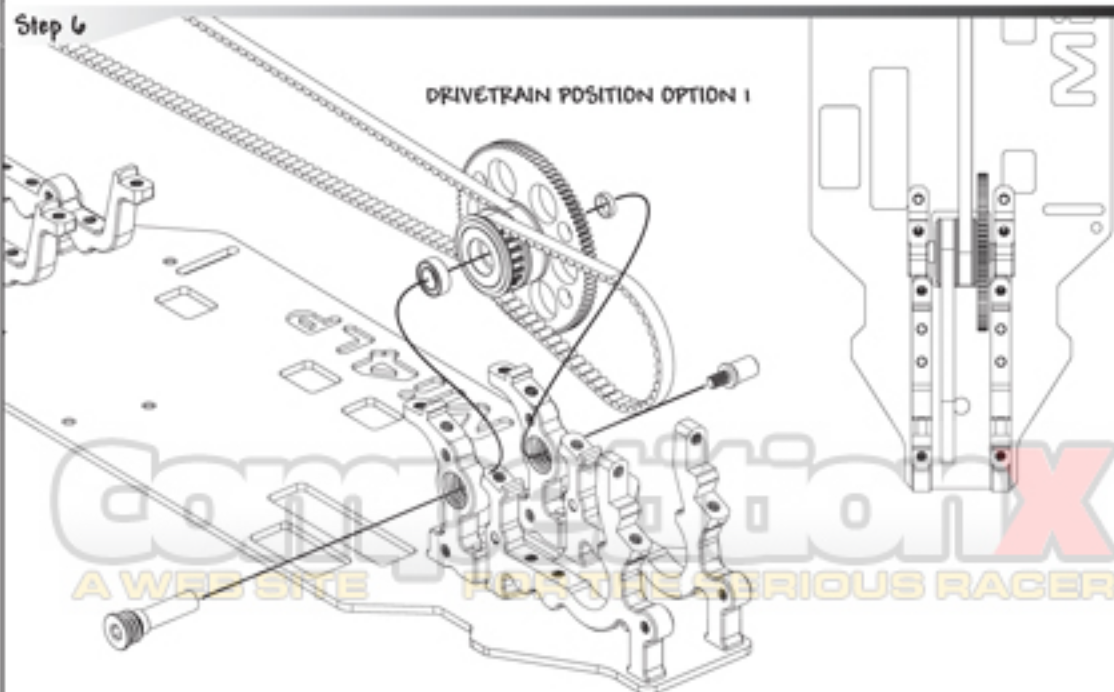
Step 5



IMPORTANT TRANSMISSION OPTIONS

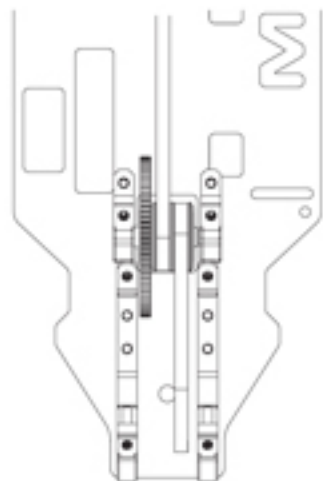
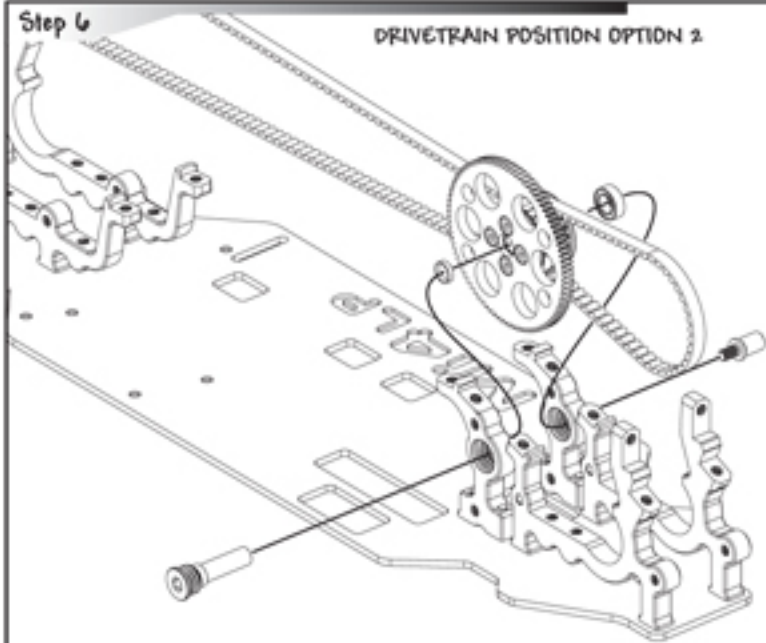
The Schumacher MIALP has the ability to flip the transmission to alter the left to right weight balance. Depending on what weight limit you run to, this is a vital tool to balance the car. If you use a lightweight Servo, ESC and RX use Option 2 transmission layout. If you have heavier equipment use Option 1 and move the radio gear as close as possible to the centre of the car. The motor position also aids in left to right balance. The U3982 Schumacher Precision Pivot Balance Set is an ideal system to balance your MIALP.

Step 6



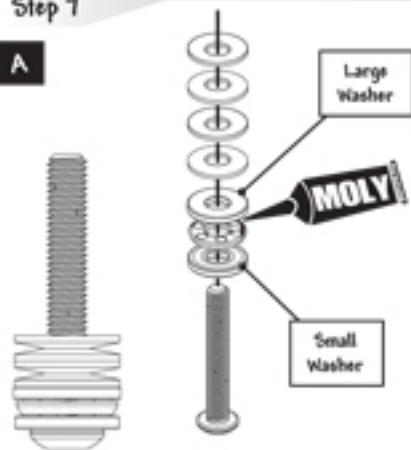
Step 6

DRIVETRAIN POSITION OPTION 2

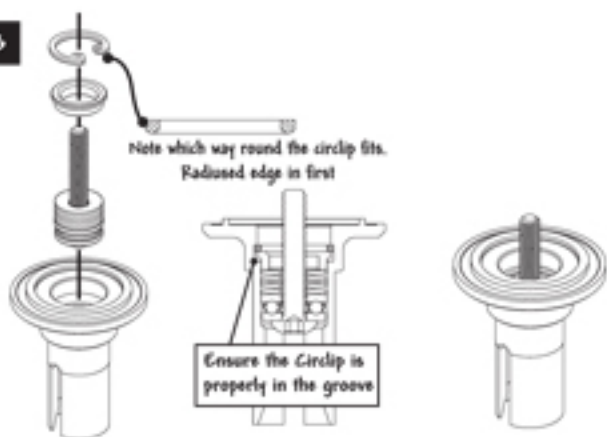


Step 7

A

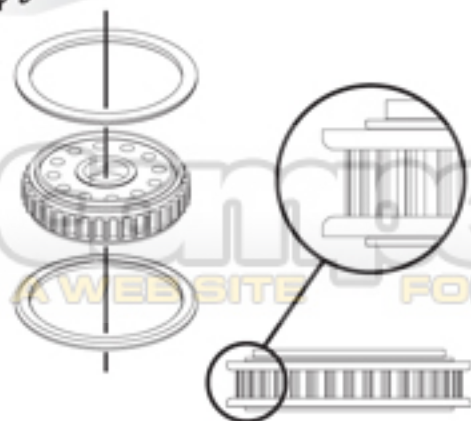


B

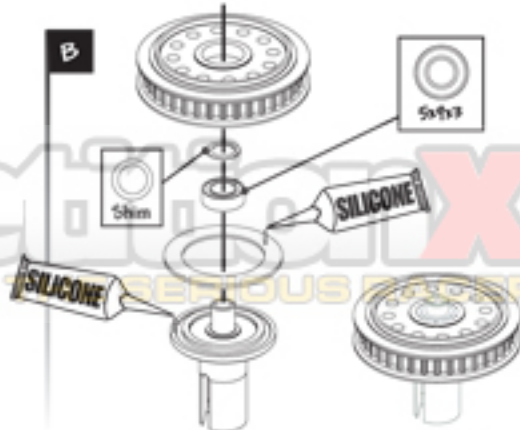


Step 8

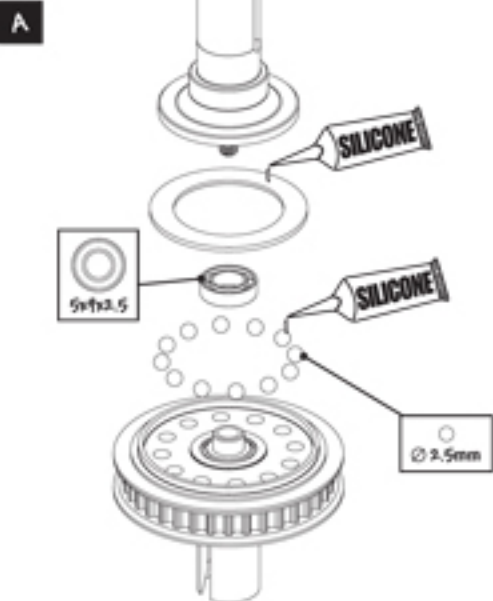
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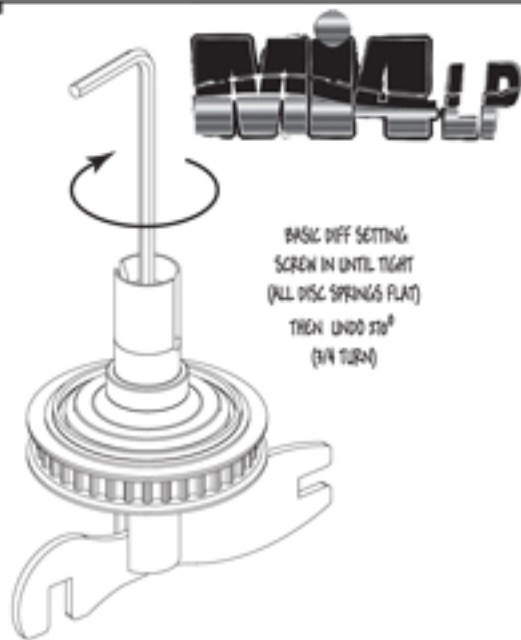
B



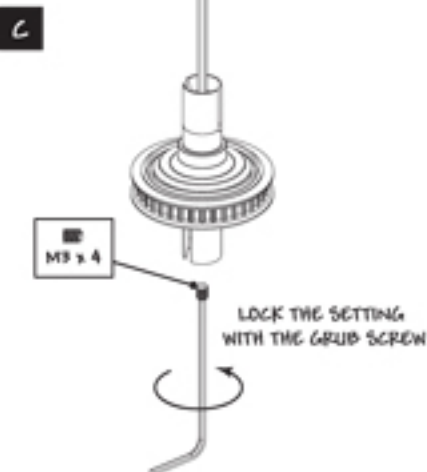
Step 9



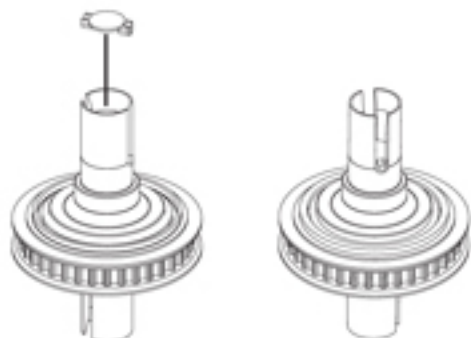
B



Step 9



D

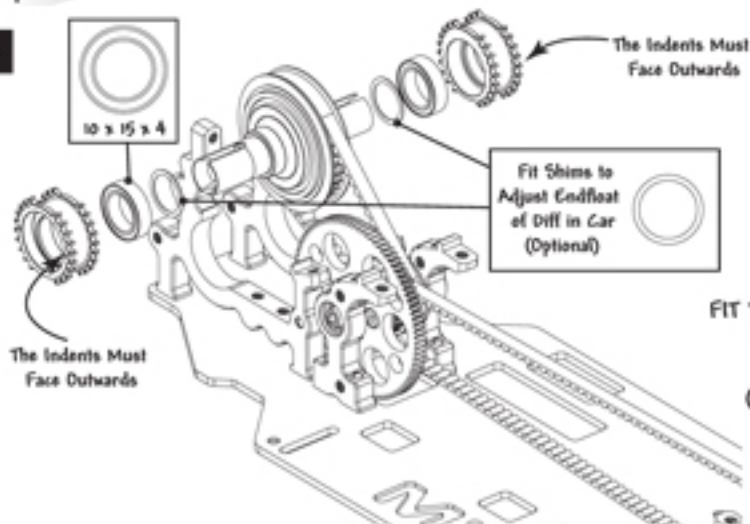


Step 10



Step 10

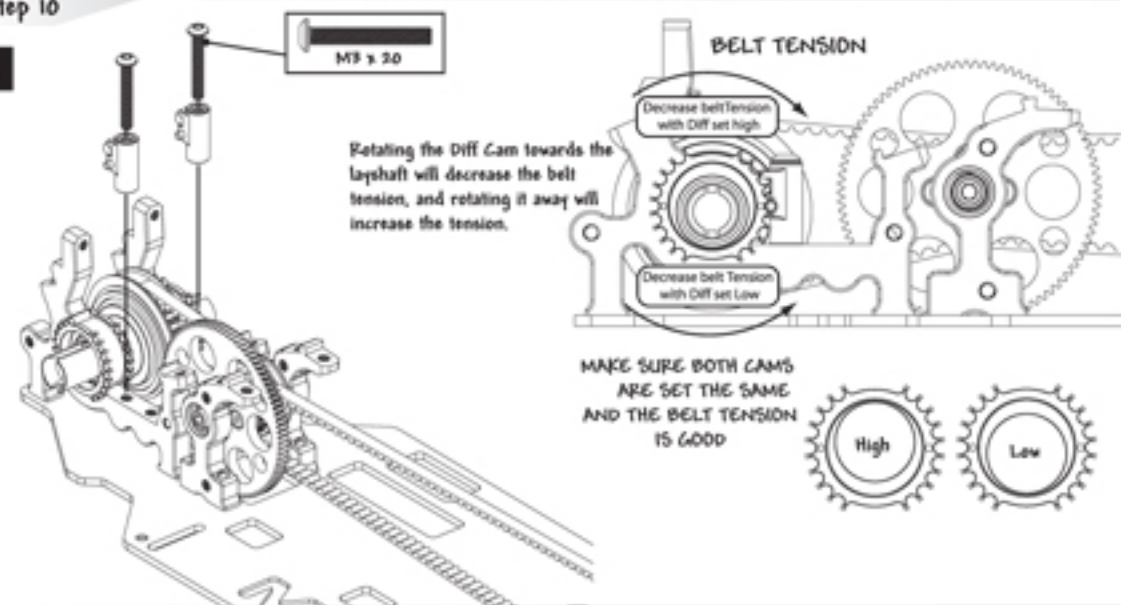
B



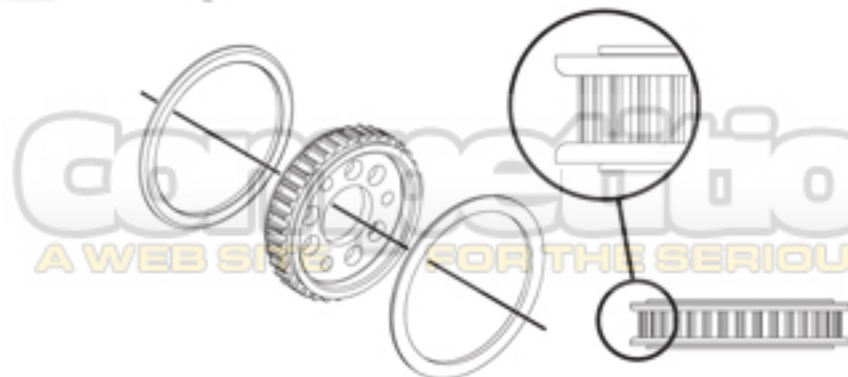
FIT THE DIFF IN THE CAR ACCORDING TO WHICH OPTION YOU CHOSE FOR THE DRIVETRAIN (FRONT BELT NEAREST GEAR)

Step 10

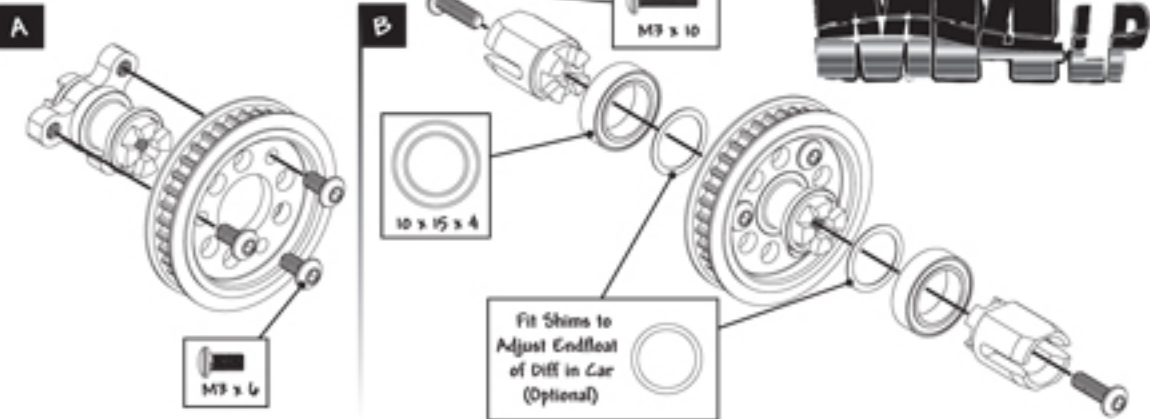
C



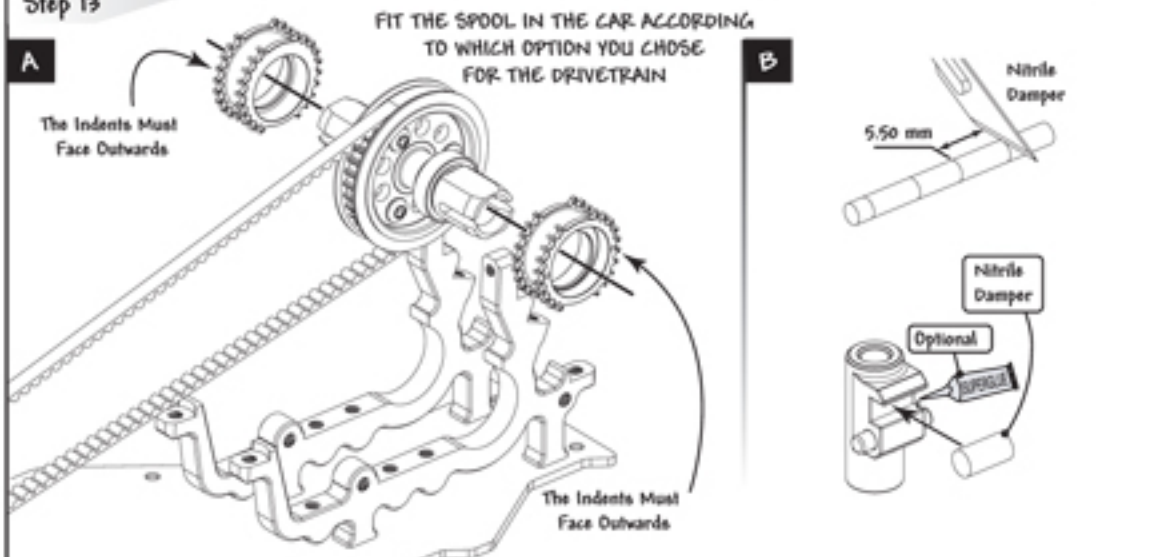
Step 11



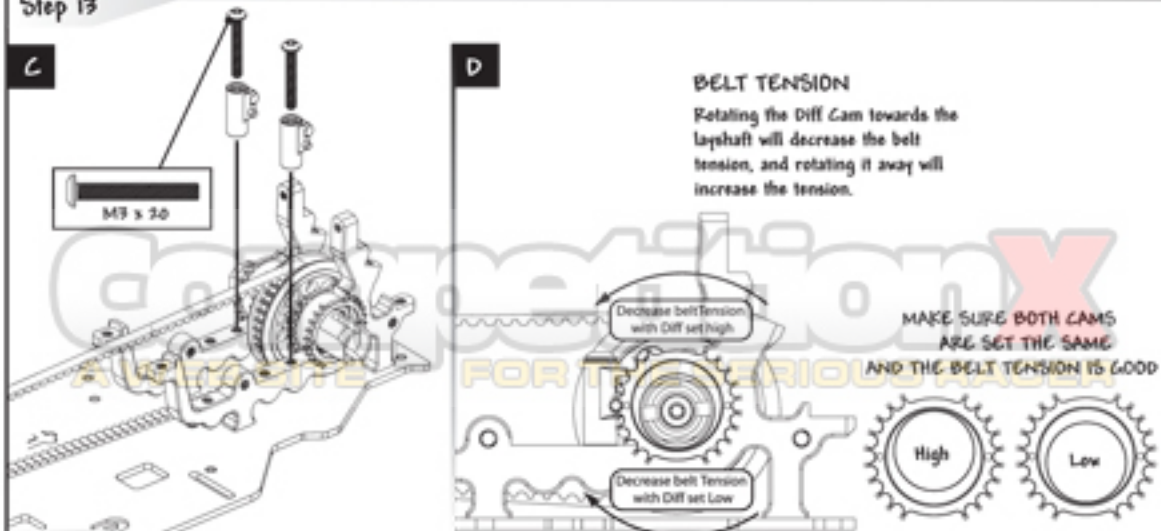
Step 12



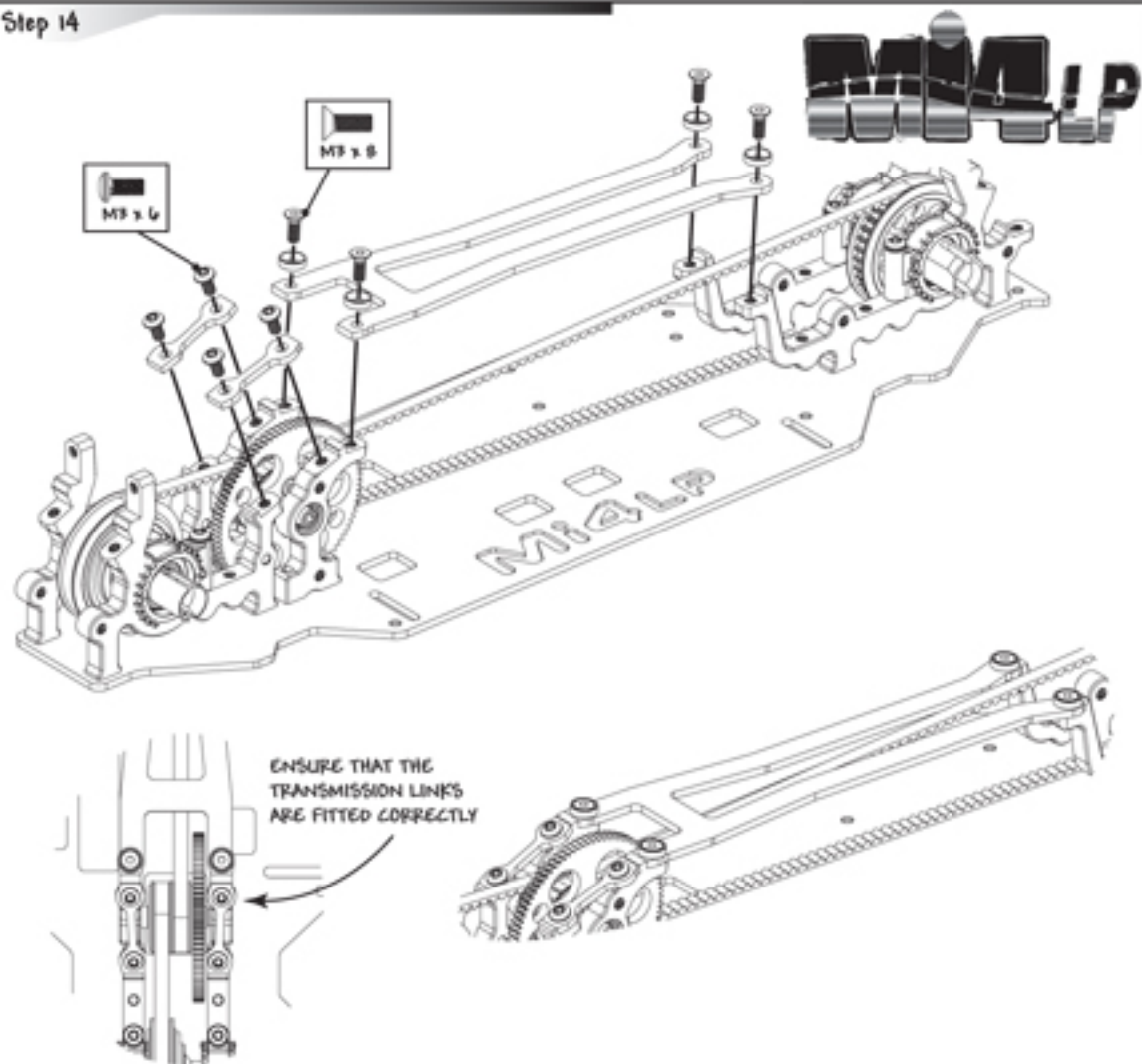
Step 13



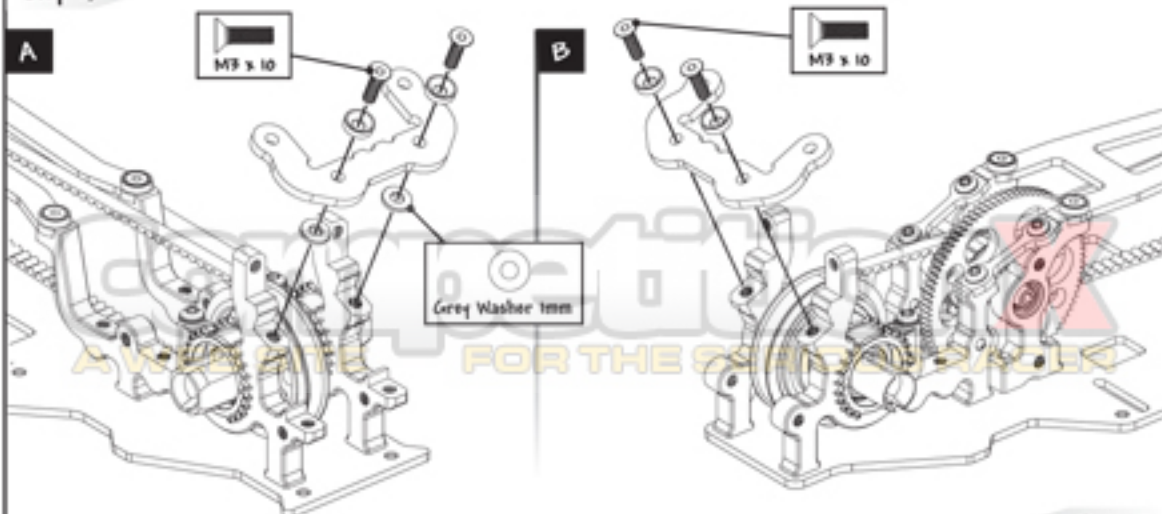
Step 13



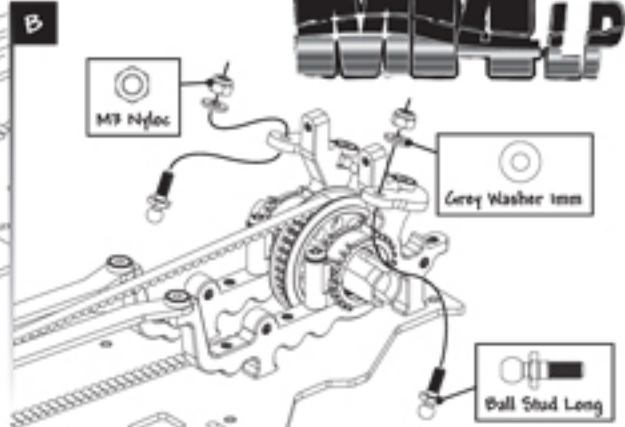
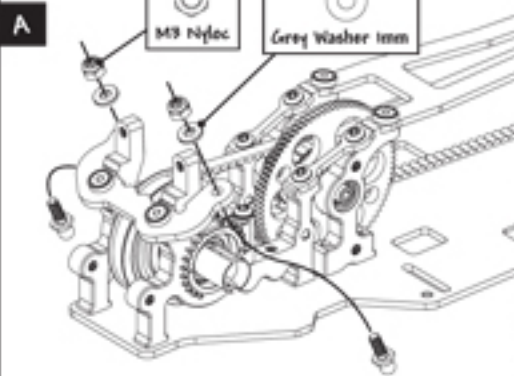
Step 14



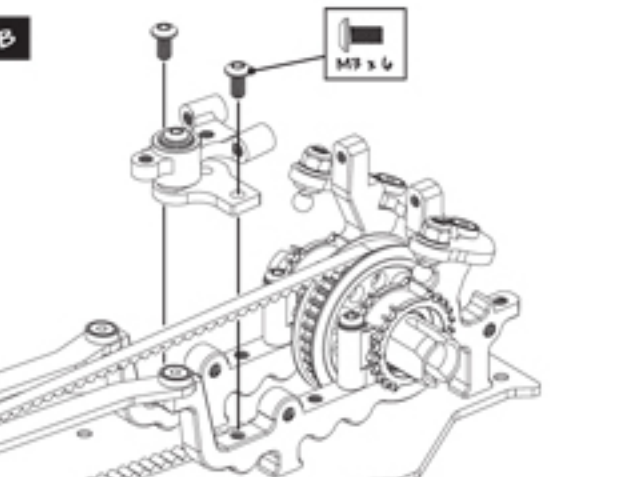
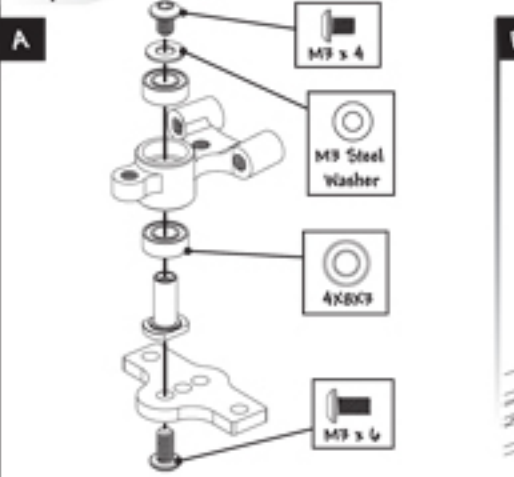
Step 15



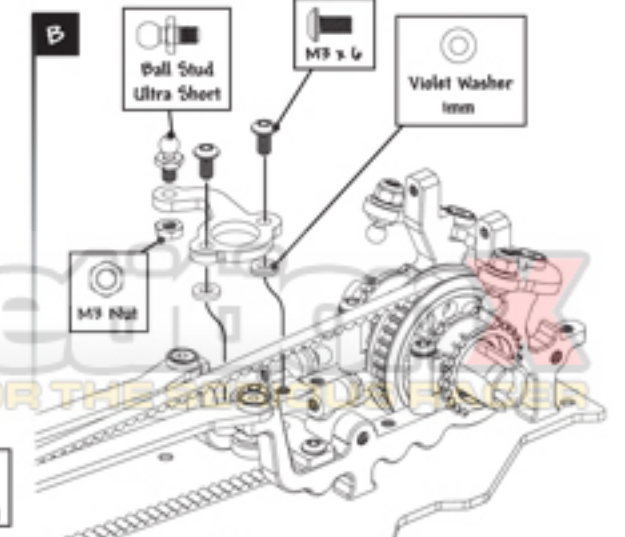
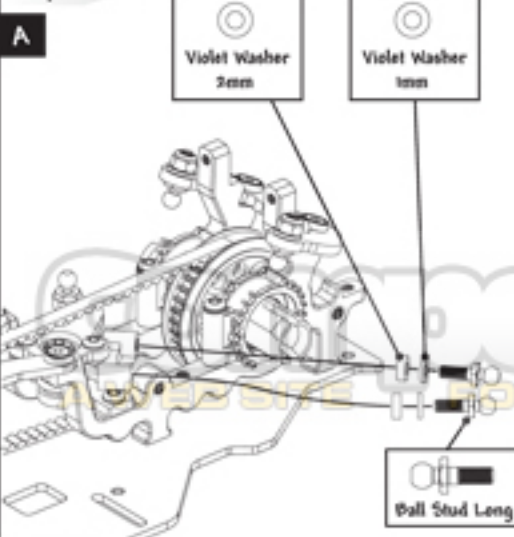
Step 16



Step 17

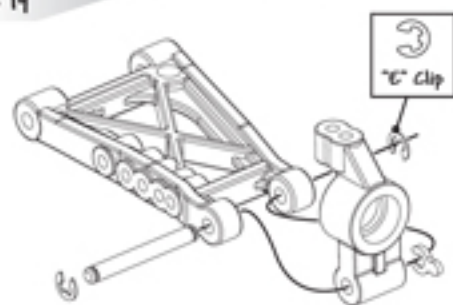


Step 18

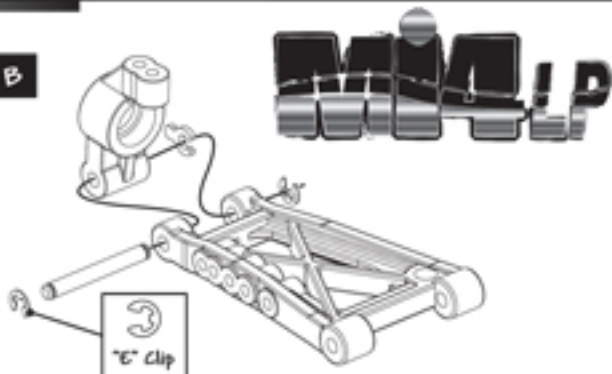


Step 19

A

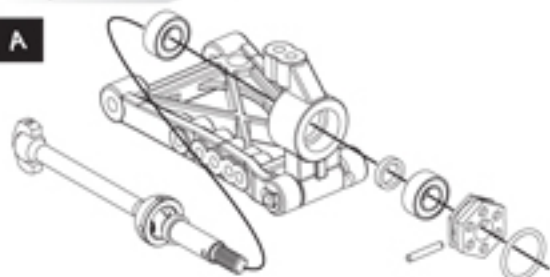


B

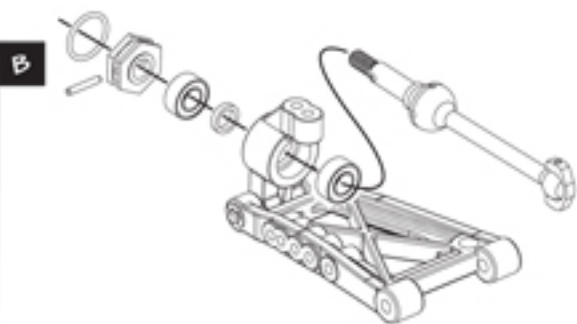


Step 20 PRO

A

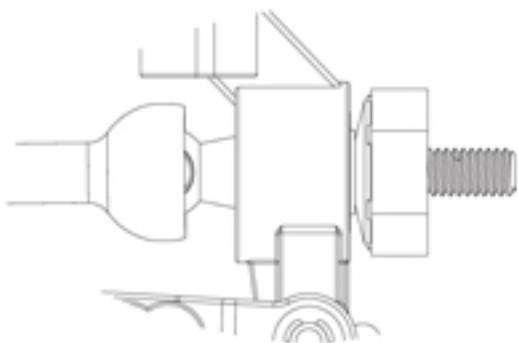
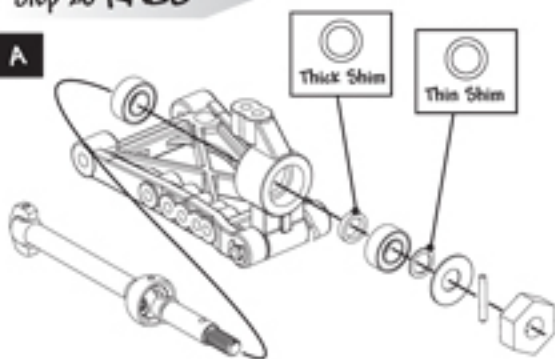


B



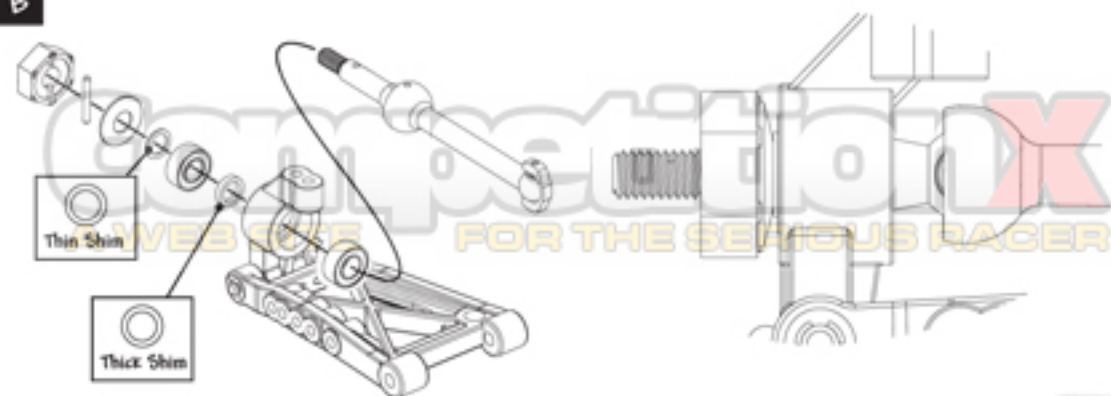
Step 20 RACE

A



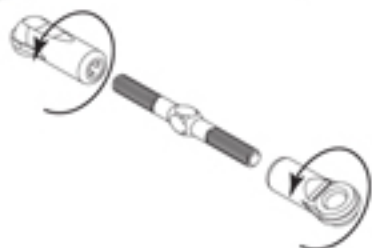
Step 20 RACE

B



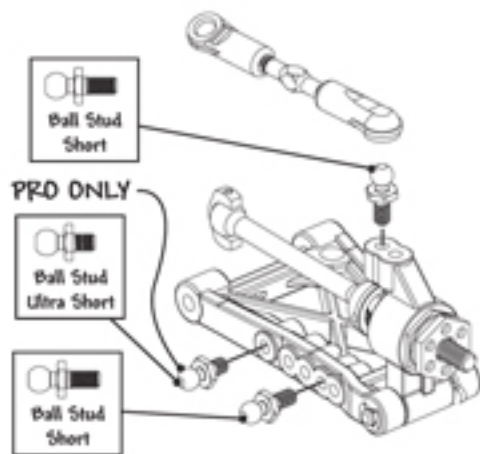
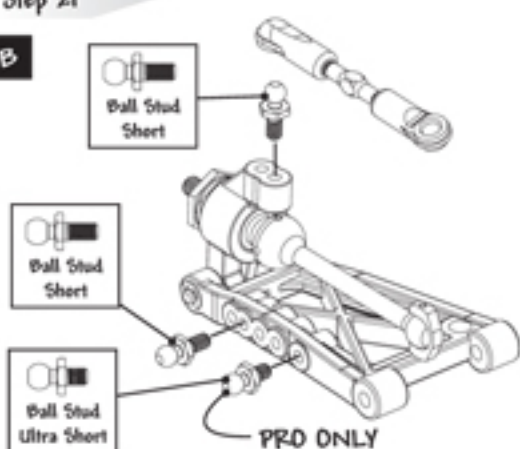
Step 21

A



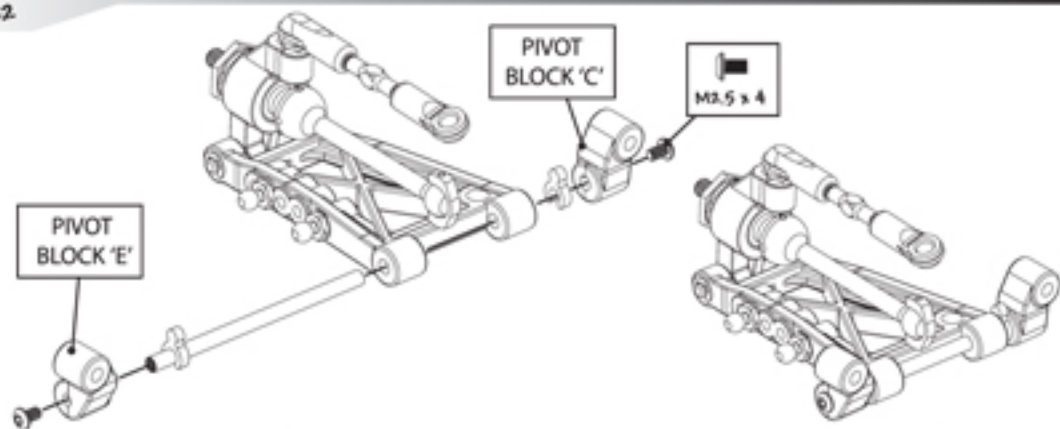
Step 21

B



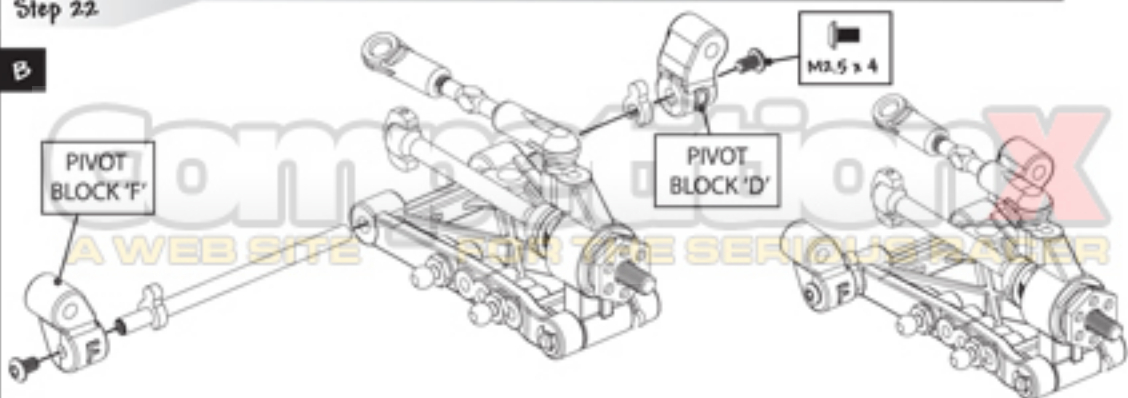
Step 22

A



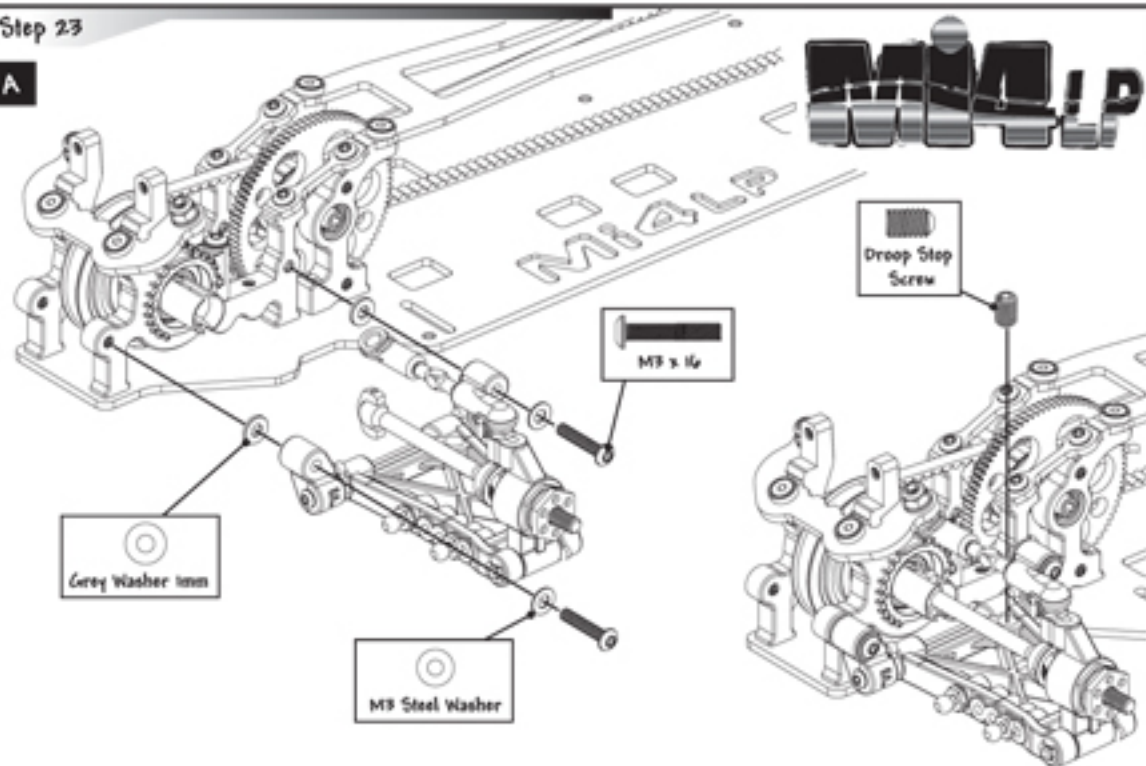
Step 22

B



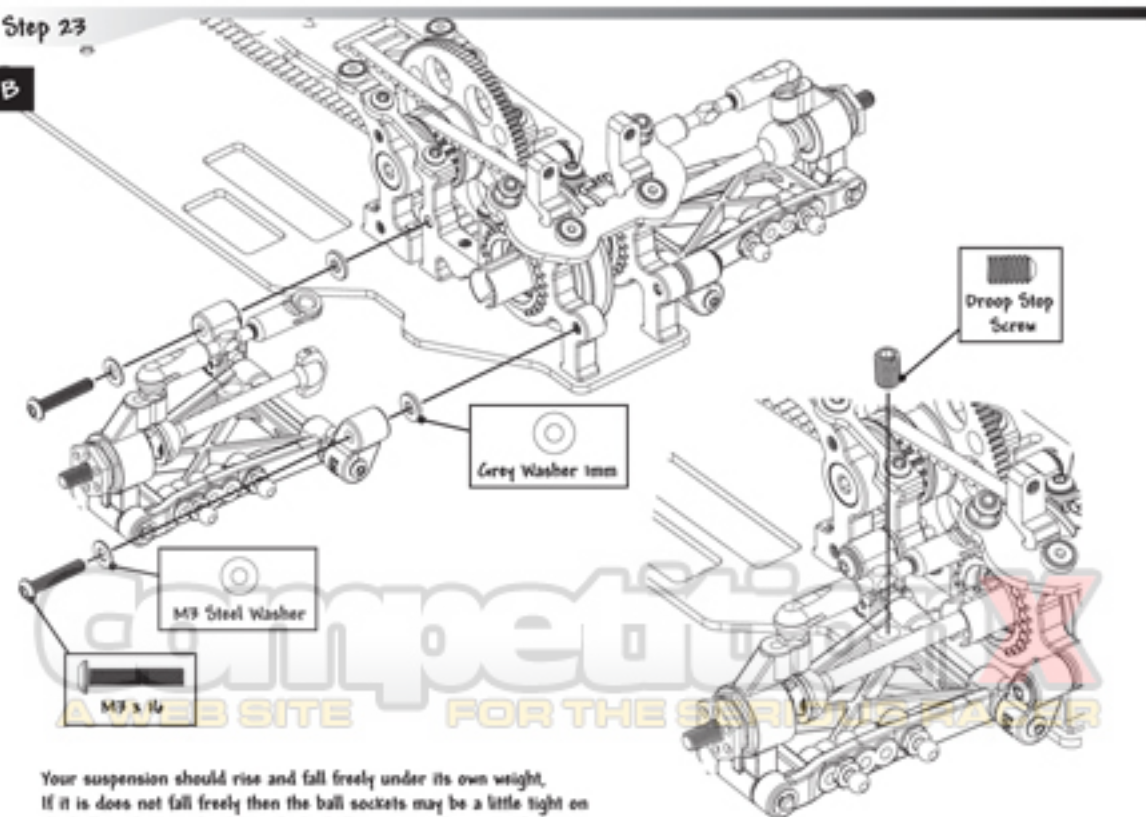
Step 23

A



Step 23

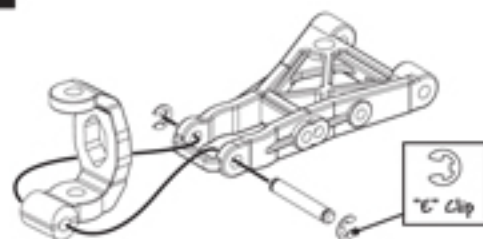
B



Your suspension should rise and fall freely under its own weight. If it does not fall freely then the ball sockets may be a little tight on the ball studs, you should pinch the ball sockets with a pair of pliers, this will loosen the socket off slightly, and allow you to fine tune the fit.

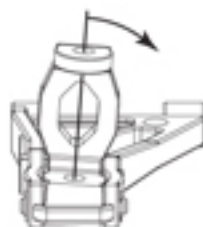
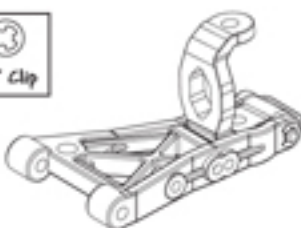
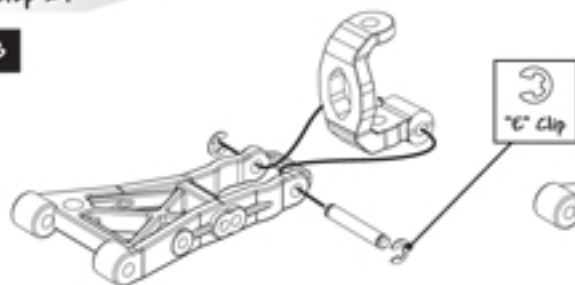
Step 24

A



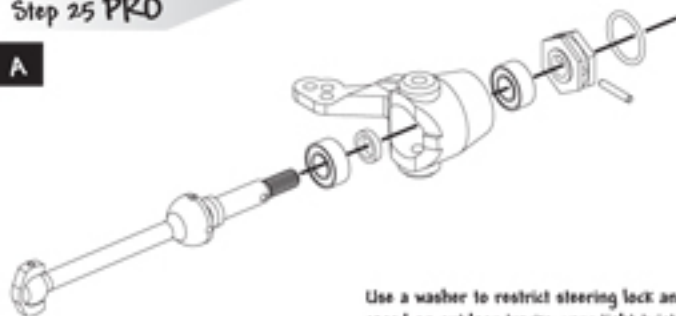
Step 24

B

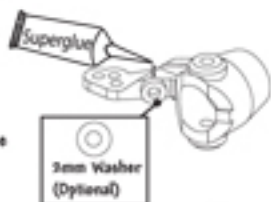


Step 25 PRO

A

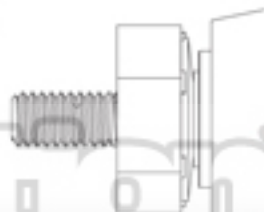
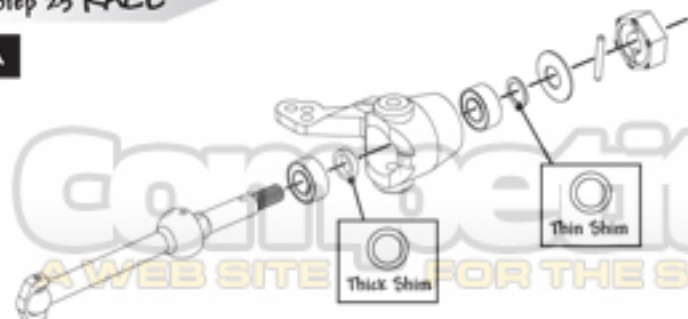


Use a washer to restrict steering lock and increase corner speed on outdoor tracks, very light twisty tracks require more lock so the washer is not required.

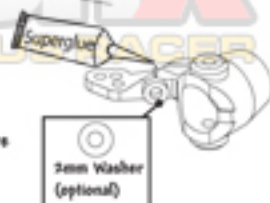


Step 25 RACE

A



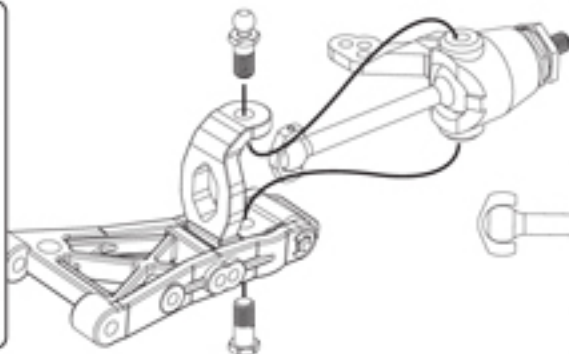
Use a washer to restrict steering lock and increase corner speed on outdoor tracks, very light twisty tracks require more lock so the washer is not required.



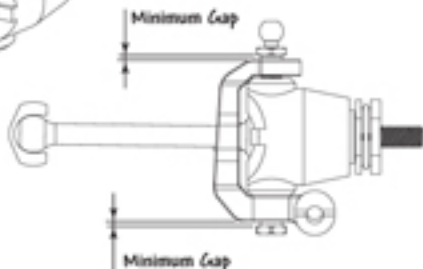
Step 25

B

Carefully Pre-tap the Hub Carrier using a Hot Runner and the M4 Pivot, this will ensure easier assembly with the yoke with better alignment.



Minimum Gap



Minimum Gap

Step 26 PRO

A

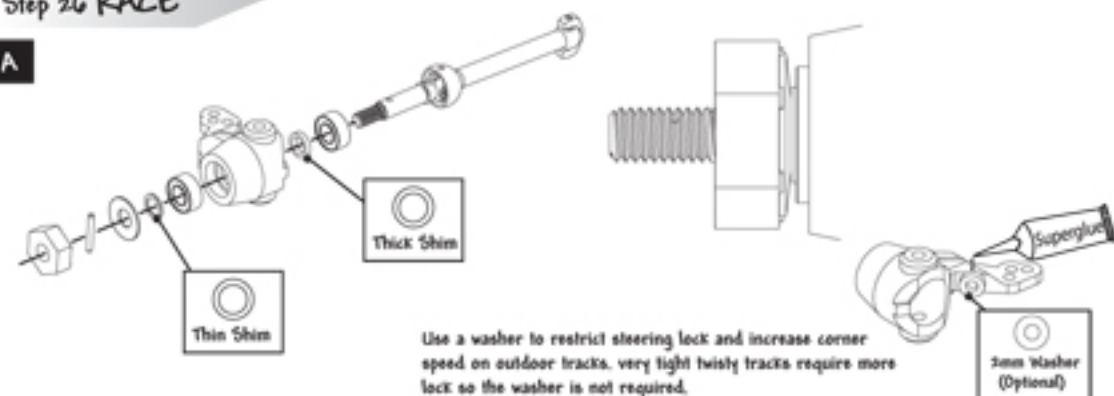


Use a washer to restrict steering lock and increase corner speed on outdoor tracks. Very light twisty tracks require more lock so the washer is not required.

3mm Washer
(Optional)

Step 26 RACE

A



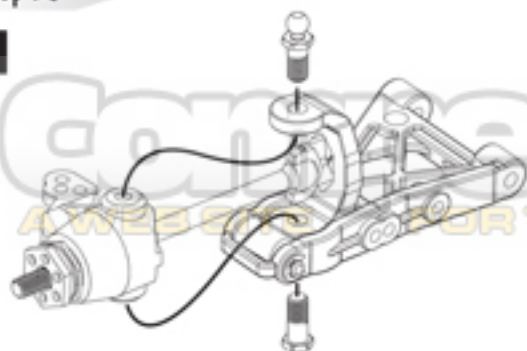
Use a washer to restrict steering lock and increase corner speed on outdoor tracks. Very light twisty tracks require more lock so the washer is not required.

3mm Washer
(Optional)

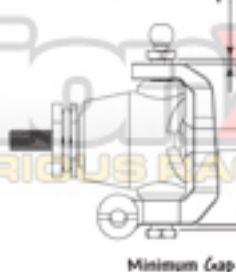
Step 26

B

Carefully Pre-tap the Hub Carrier using a Hot Runner and the M4 Pivot, this will ensure easier assembly with the yoke with better alignment.

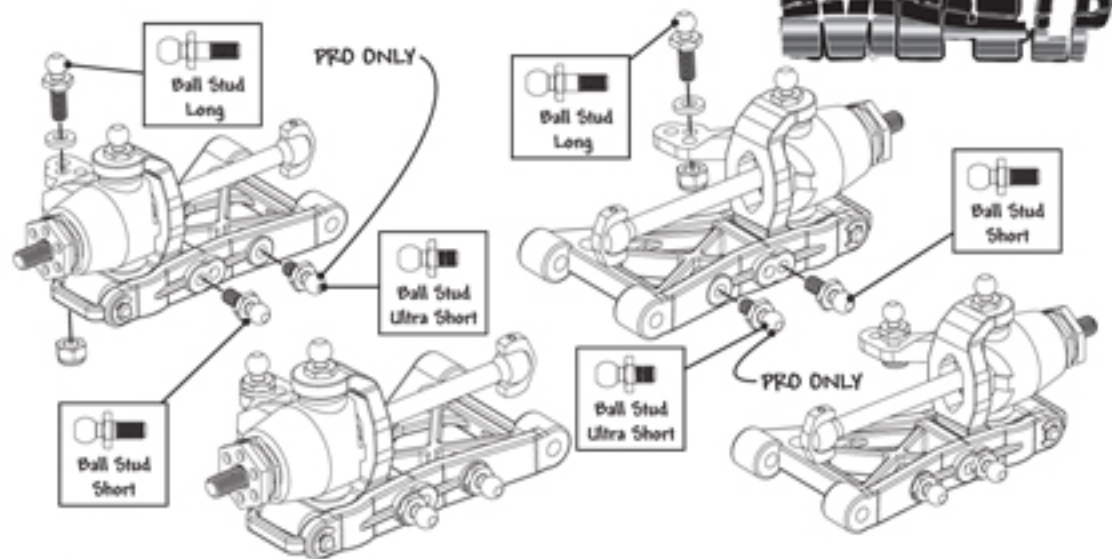


Minimum Gap



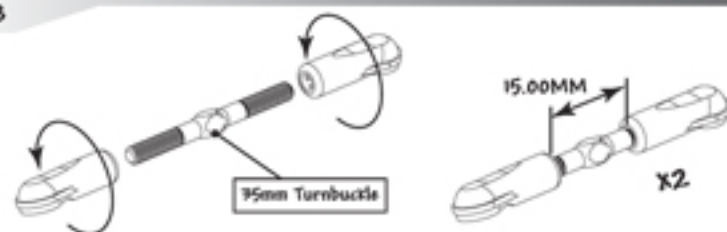
Minimum Gap

Step 27



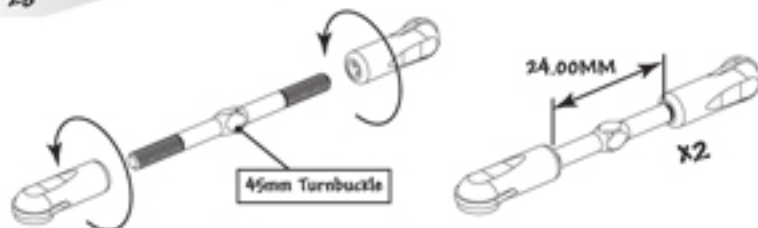
Step 28

A



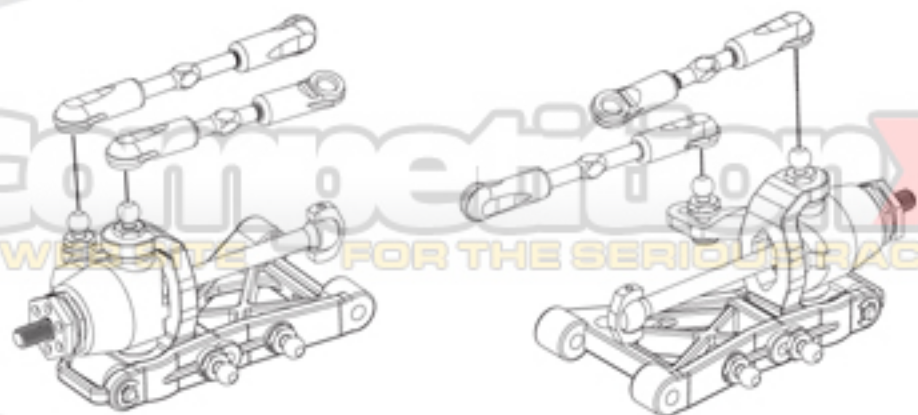
Step 28

B



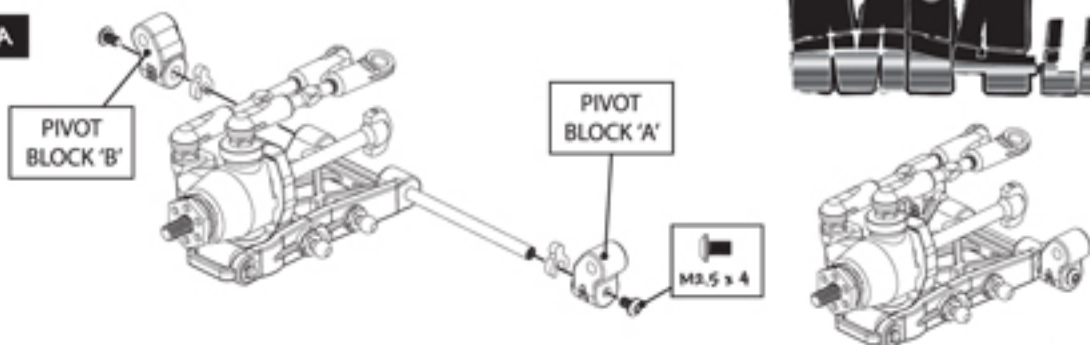
Step 28

C



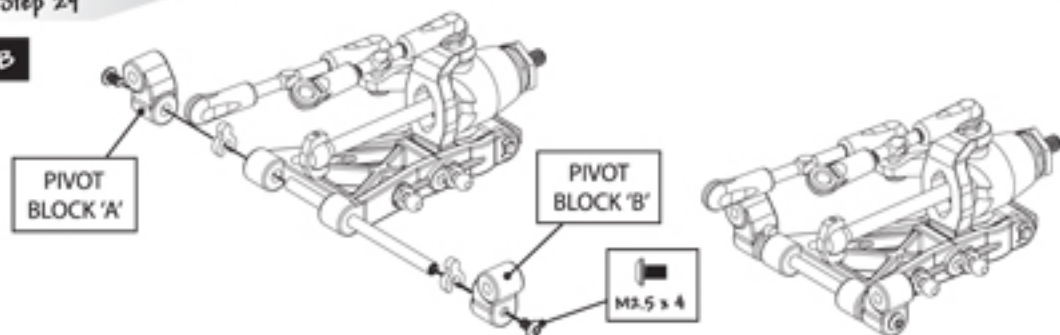
Step 29

A



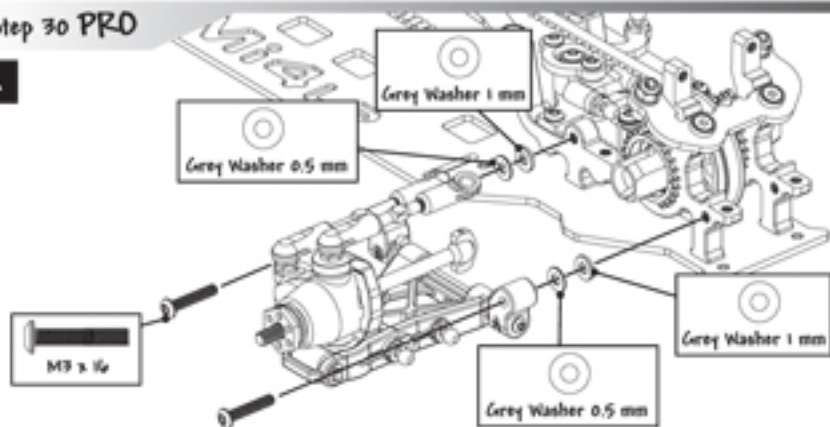
Step 29

B



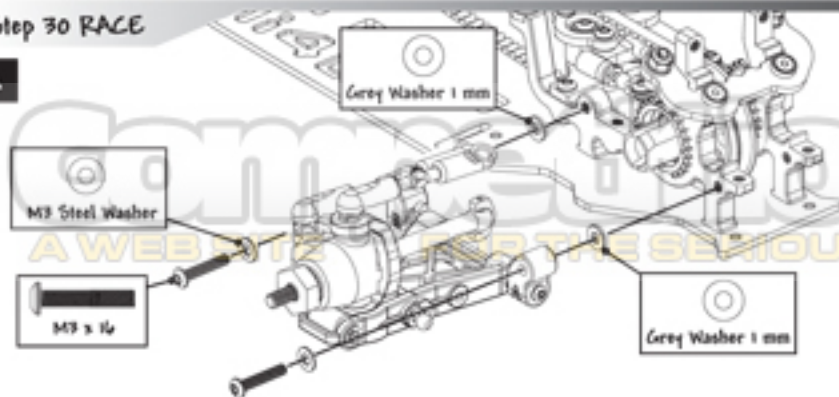
Step 30 PRO

A

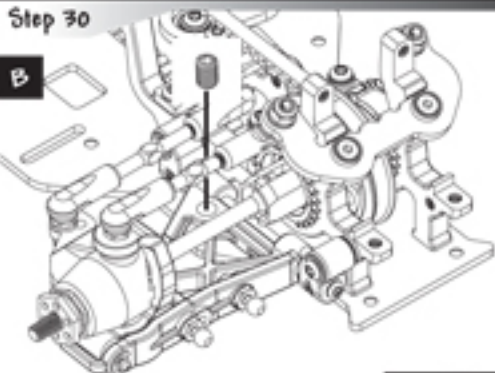


Step 30 RACE

A

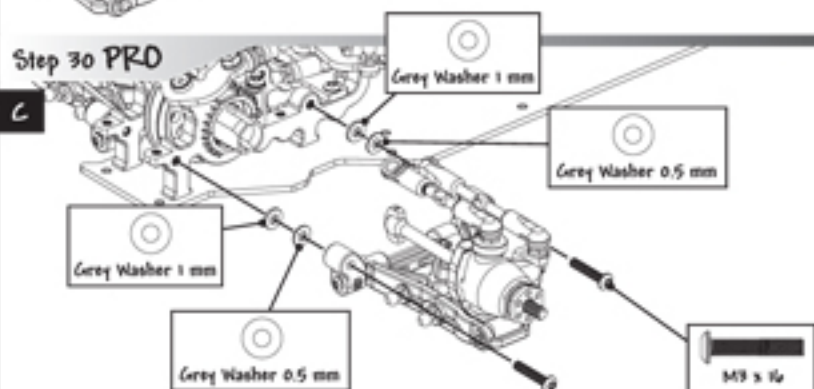


Step 30

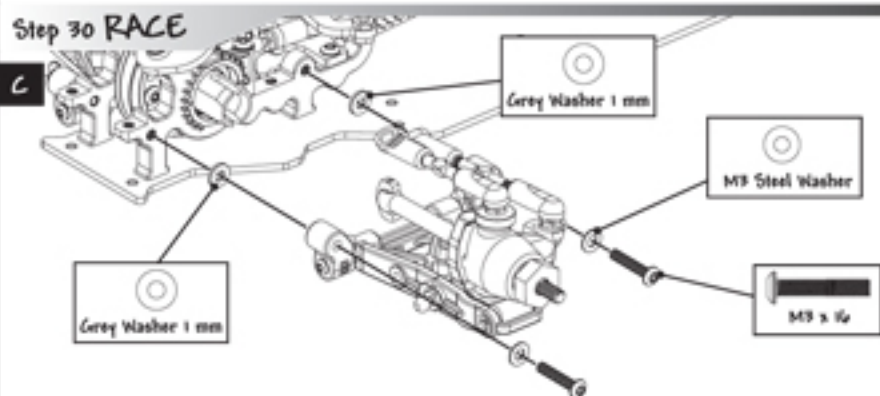
B

Your suspension should rise and fall freely under its own weight, if it is does not fall freely then the ball sockets may be a little tight on the ball studs, you should pinch the ball sockets with a pair of pliers, this will loosen the socket off slightly, and allow you to fine tune the fit.

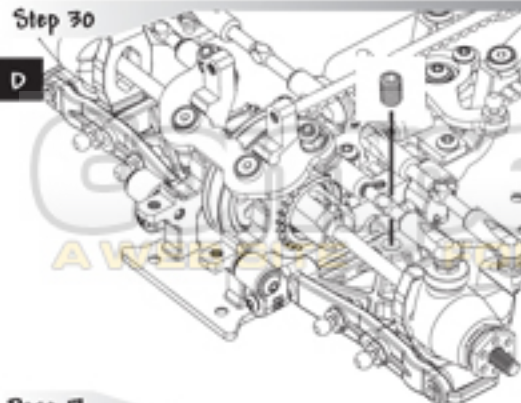
Step 30 PRO

C

Step 30 RACE

C

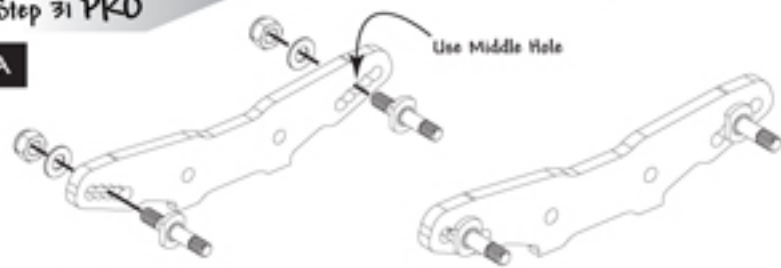
Step 30

D

Your suspension should rise and fall freely under its own weight, if it is does not fall freely then the ball sockets may be a little tight on the ball studs, you should pinch the ball sockets with a pair of pliers, this will loosen the socket off slightly, and allow you to fine tune the fit.

Step 31 PRO

A



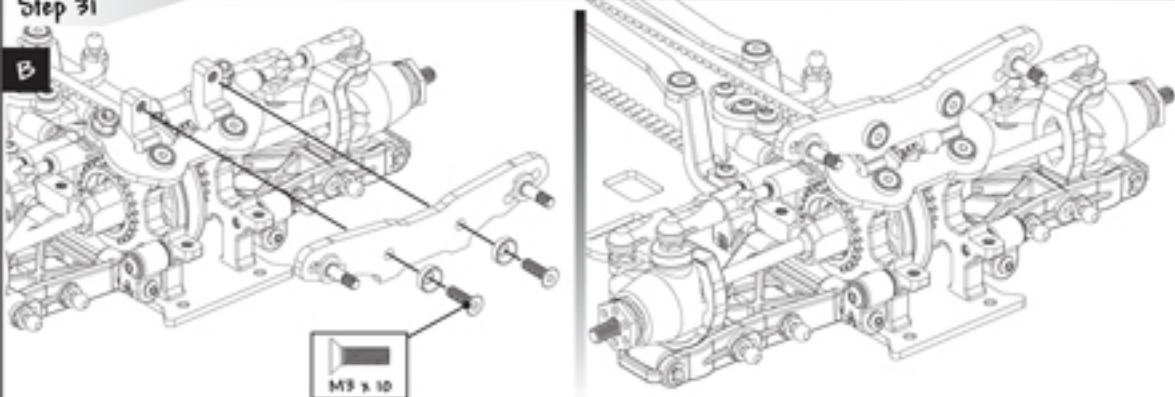
Step 31 RACE

A



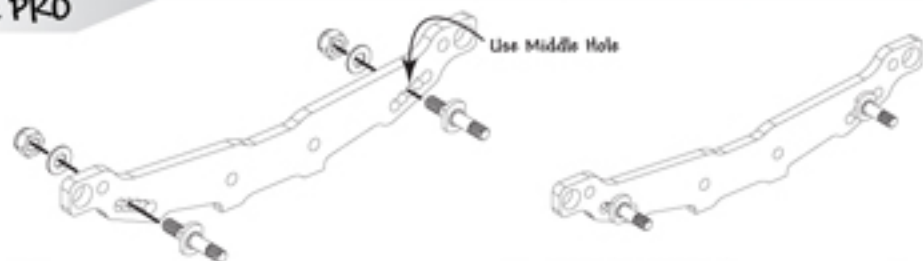
Step 31

B



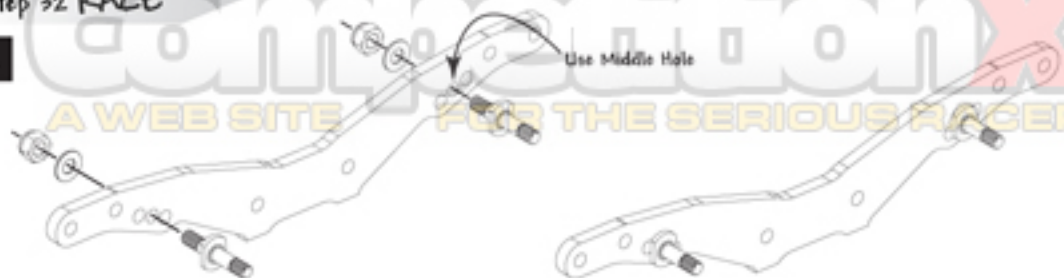
Step 32 PRO

A



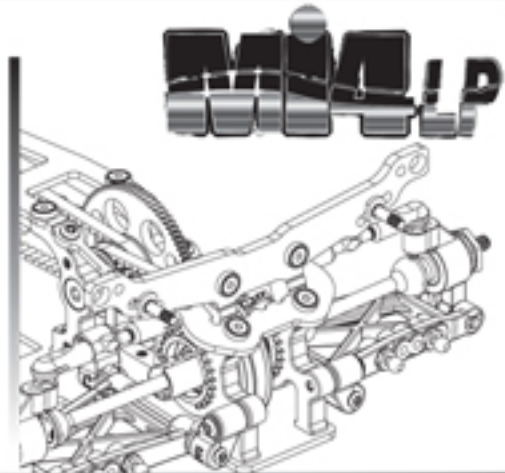
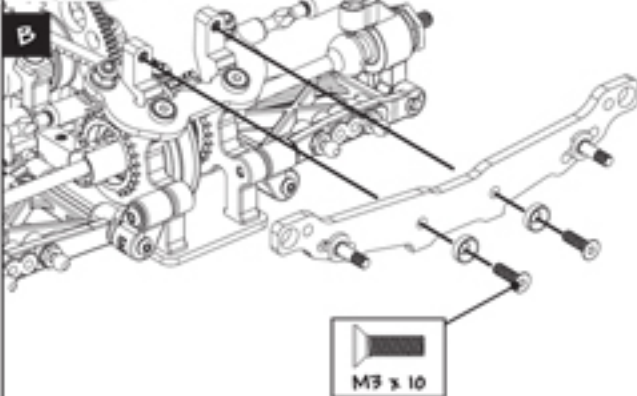
Step 32 RACE

A

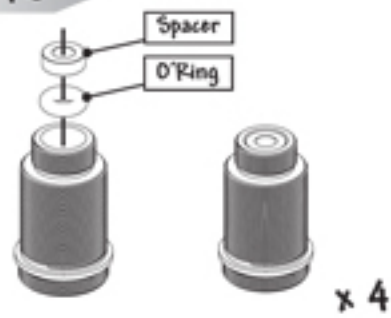


COMPETITION X
A WEB SITE FOR THE SERIOUS RACER

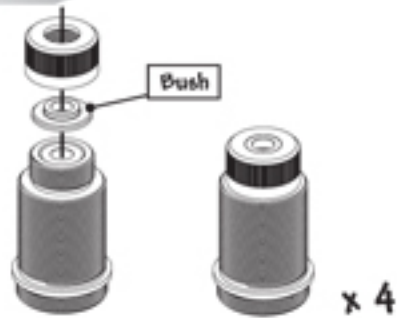
Step 32



Step 33 PRO



Step 34 PRO



Step 35 PRO



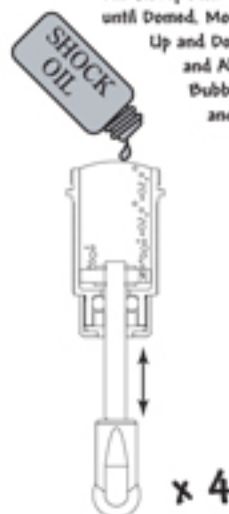
Step 36 PRO



Step 36 PRO

B

Fill Slowly With Shock Oil until Dented. Move Piston Up and Down Slowly and Allow all Air Bubbles to Rise and disappear.



C



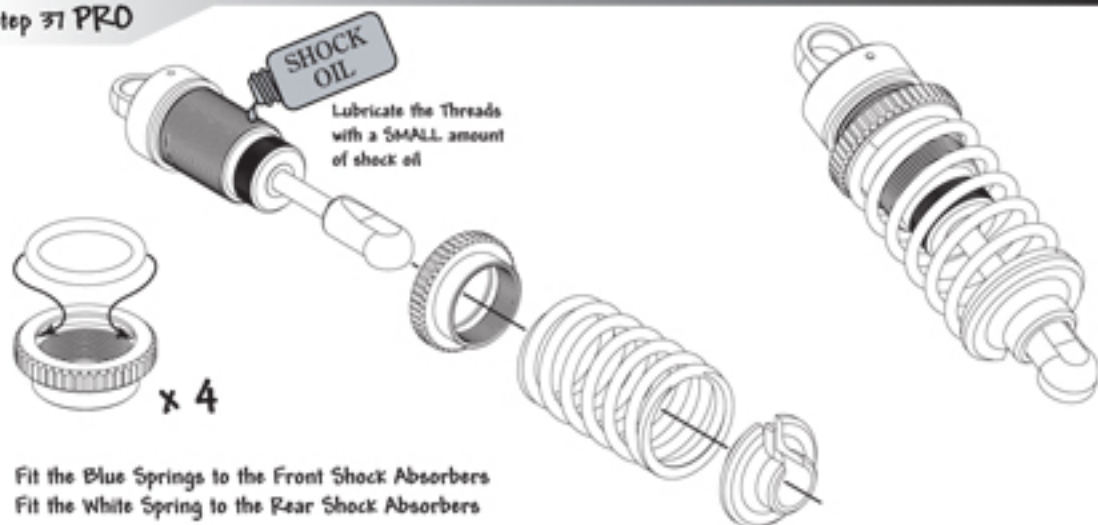
Adjust this distance (X) to suit the amount of rebound you want
Bigger Distance = More Rebound



D

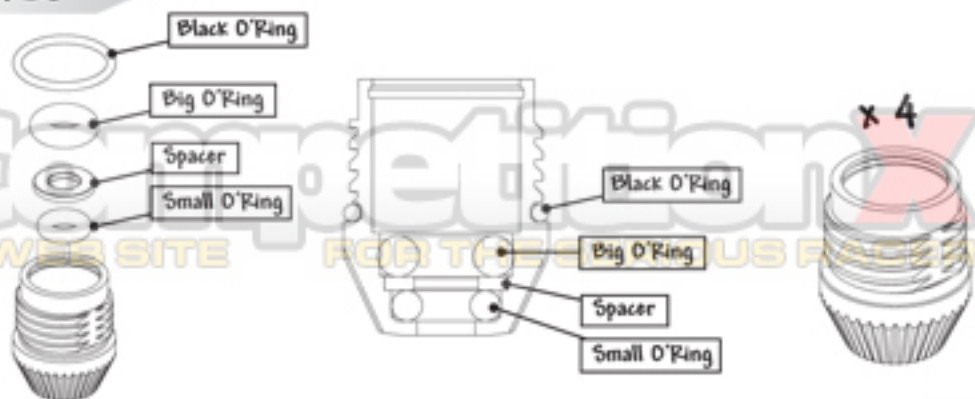


Step 37 PRO



Fit the Blue Springs to the Front Shock Absorbers
Fit the White Spring to the Rear Shock Absorbers

Step 33 RACE



Step 34 RACE

A



B

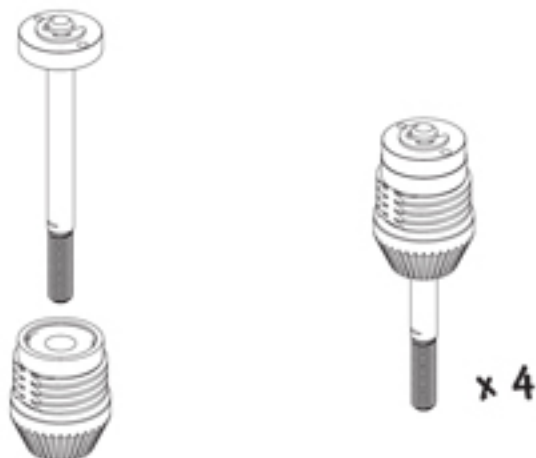


Step 35 RACE

A

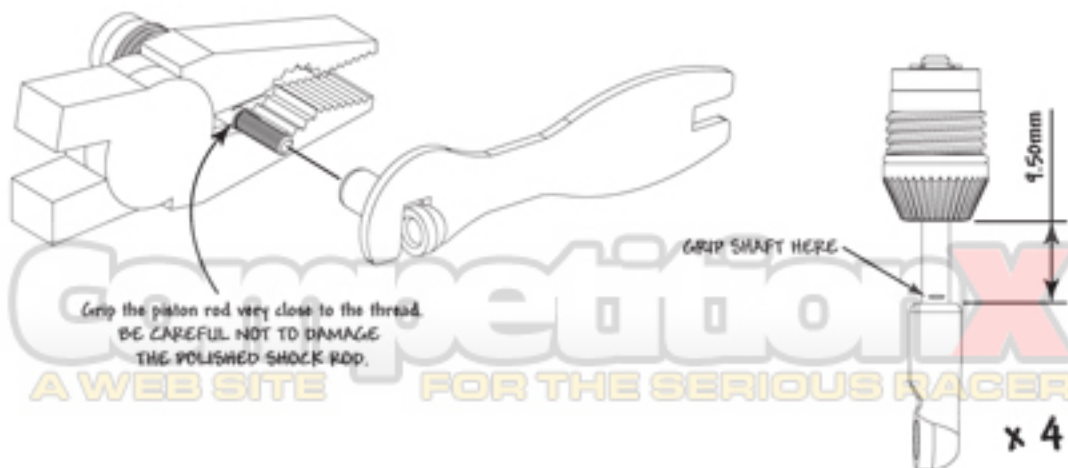


B



Step 36 RACE

A

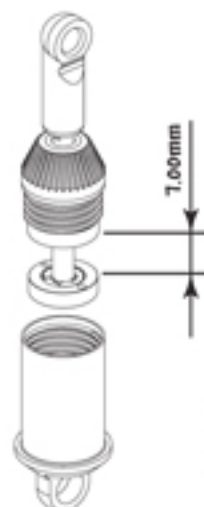


Step 36 RACE

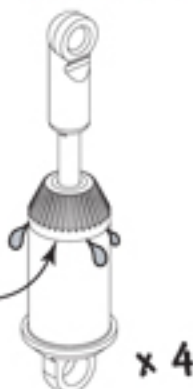
A



B

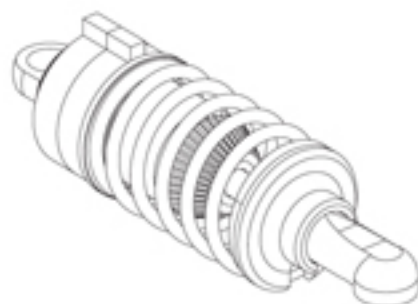
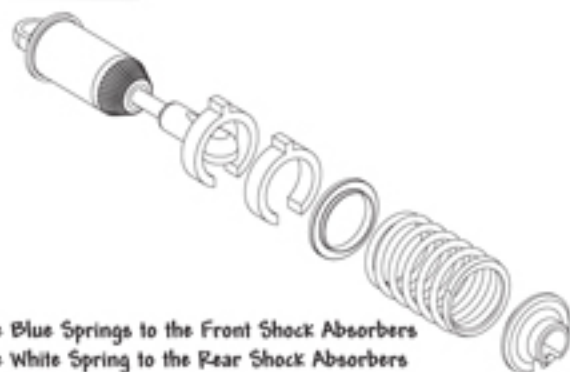


Ensure that the Black O'ring is NOT Visible



Step 37 RACE

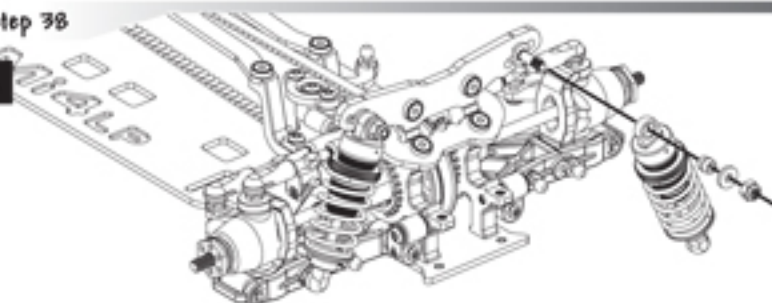
A



Fit the Blue Springs to the Front Shock Absorbers
Fit the White Spring to the Rear Shock Absorbers

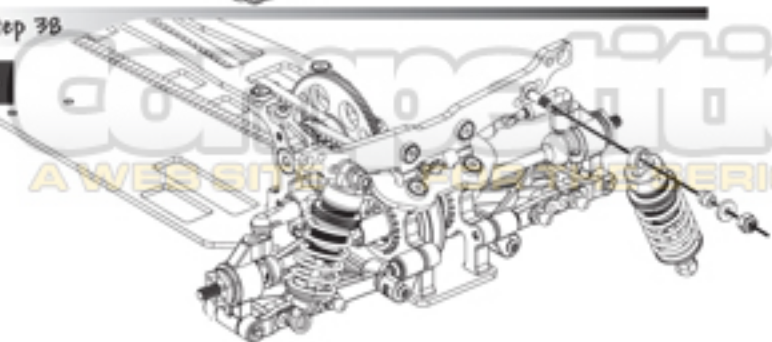
Step 38

A



Step 38

B

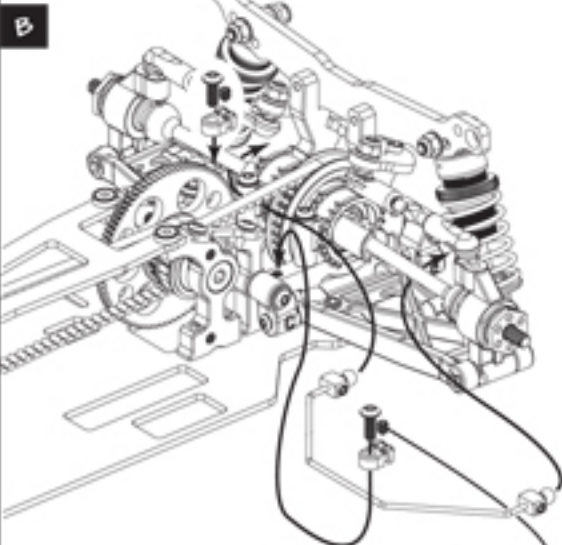


AWESOME SERIOUS RACER

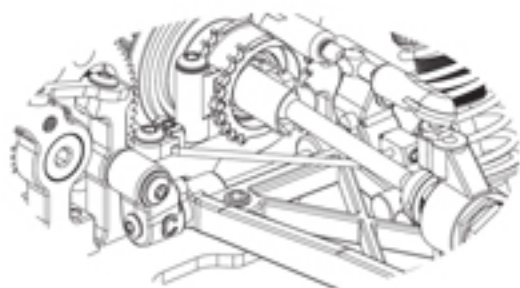
Step 39 PRO



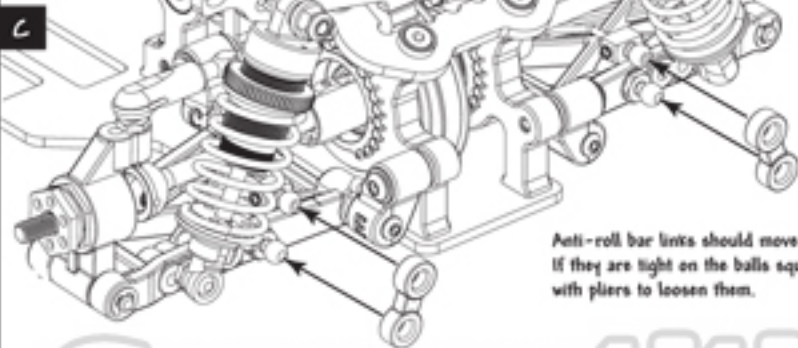
Step 39 PRO



Carefully Adjust the grub screw to eliminate roll bar play



Step 39 PRO



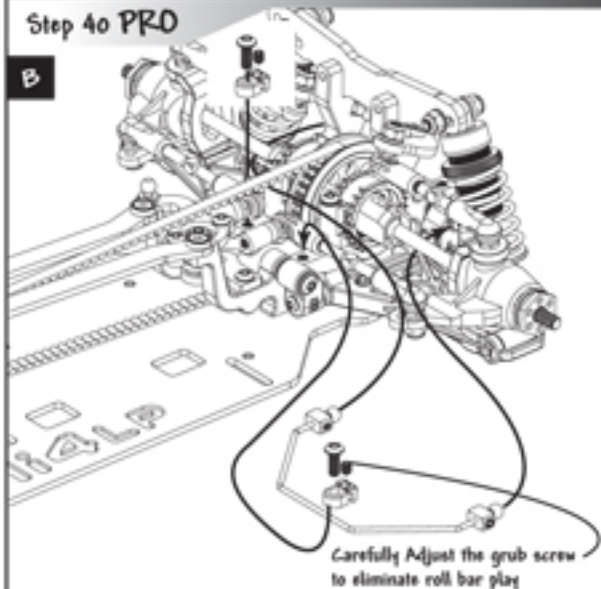
Anti-roll bar links should move freely. If they are tight on the balls squeeze them with pliers to loosen them.

Step 40 PRO

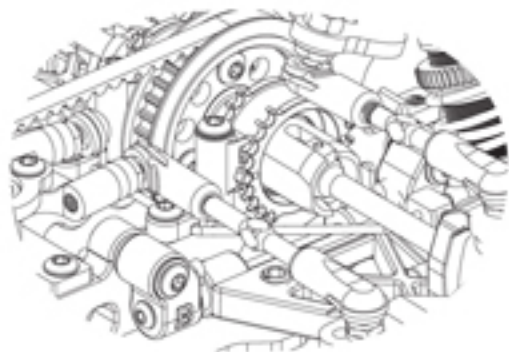


Step 40 PRO

B

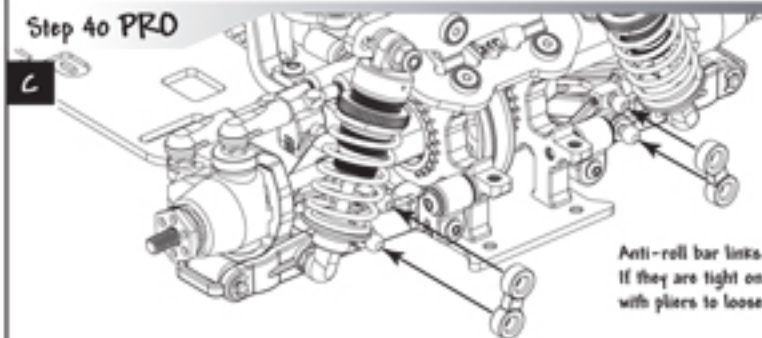


WALP

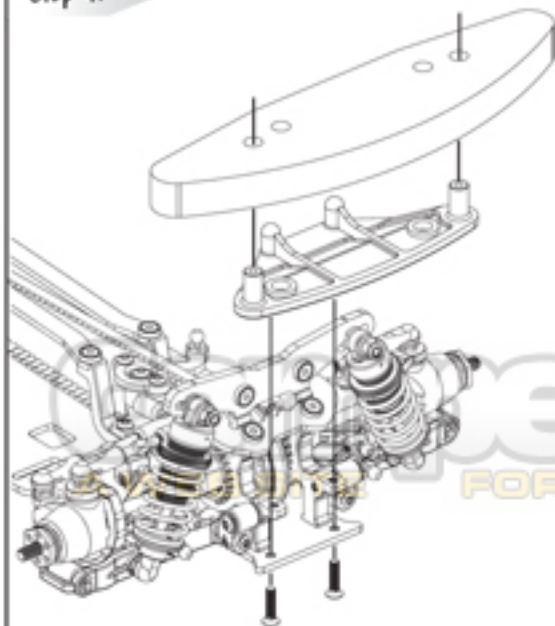


Step 40 PRO

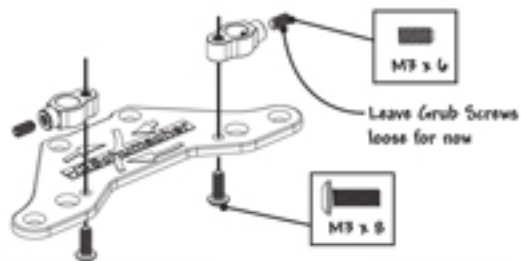
C



Step 41



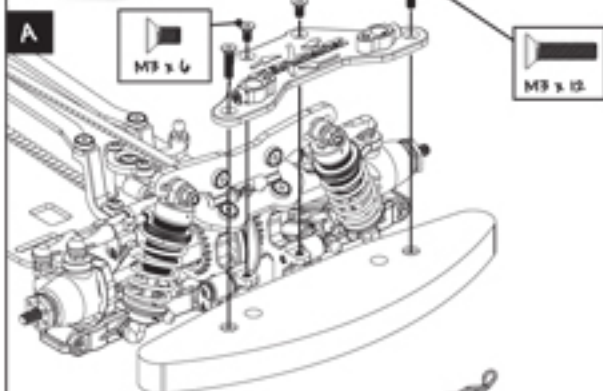
Step 42



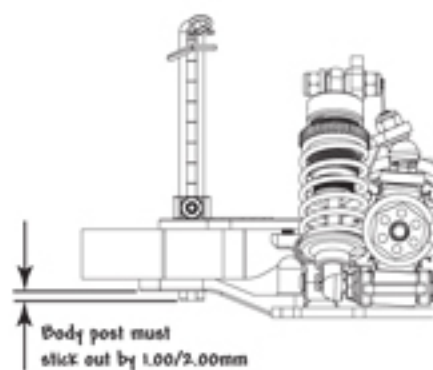
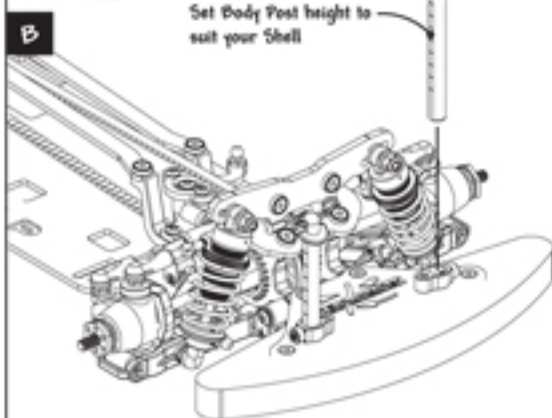
Creation X

FOR THE SERIES 210 TRUCK

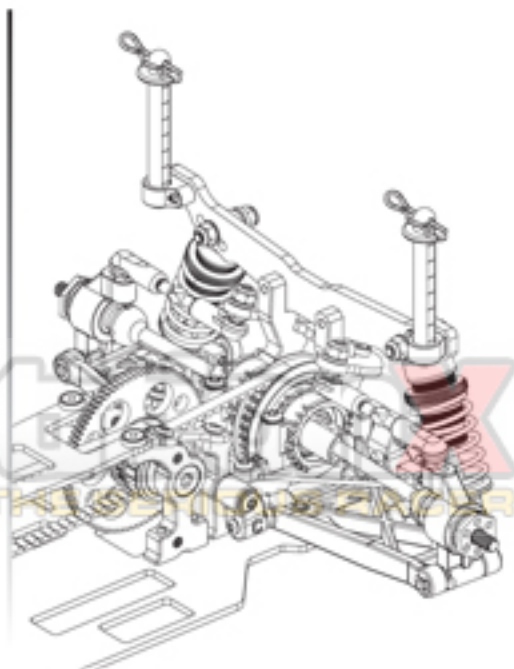
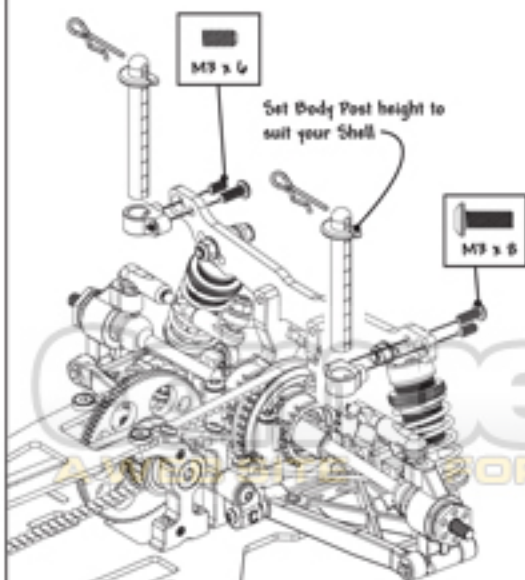
Step 43



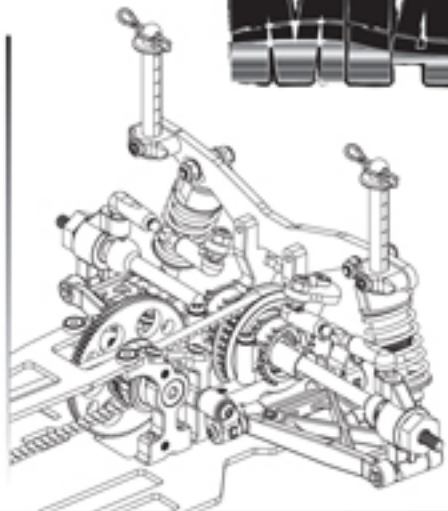
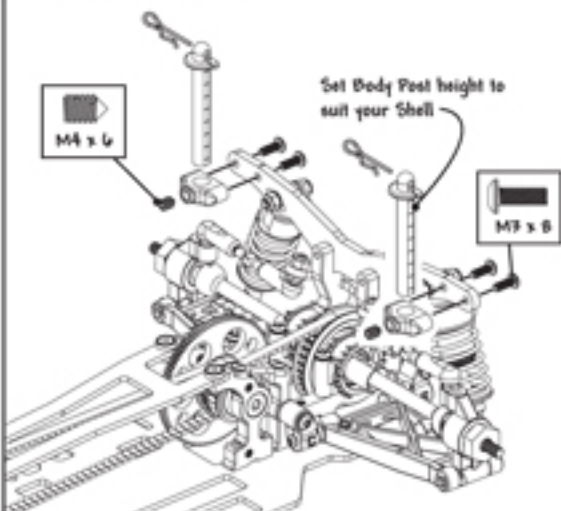
Step 43



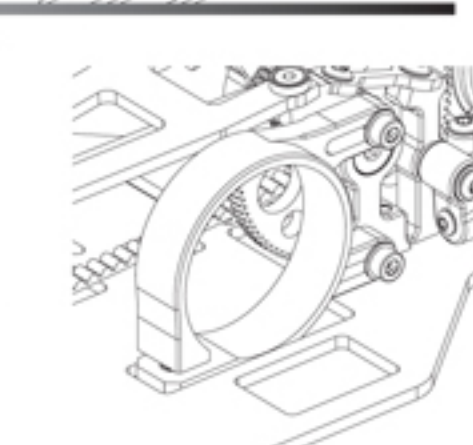
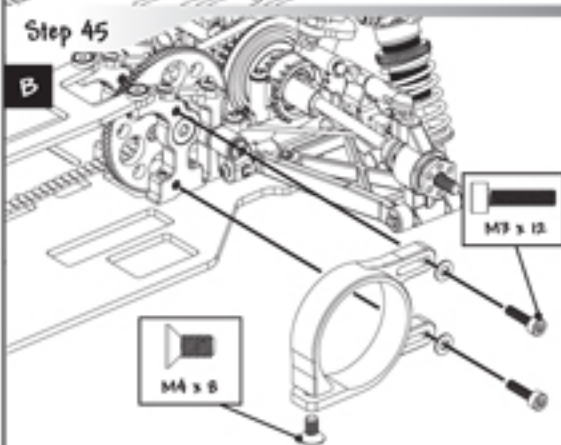
Step 44 PRO



Step 44 SPORT



Step 45



Step 46

SERVO SAVER OPTION

CHOOSE THE CORRECT
HORN FOR YOUR SERVO.
SA = SAKANA/ELECTRONICS
FU = FUTABA
SR = HITEC

NO SERVO SAVER

ROTATE 180°
TO PRE-LOAD
SPRING

Ball Stud
Ultra Short

Ball Stud
Ultra Short

The Servo
is NOT included

The Servo is
NOT included

Screw supplied
with Servo

90°
At Neutral

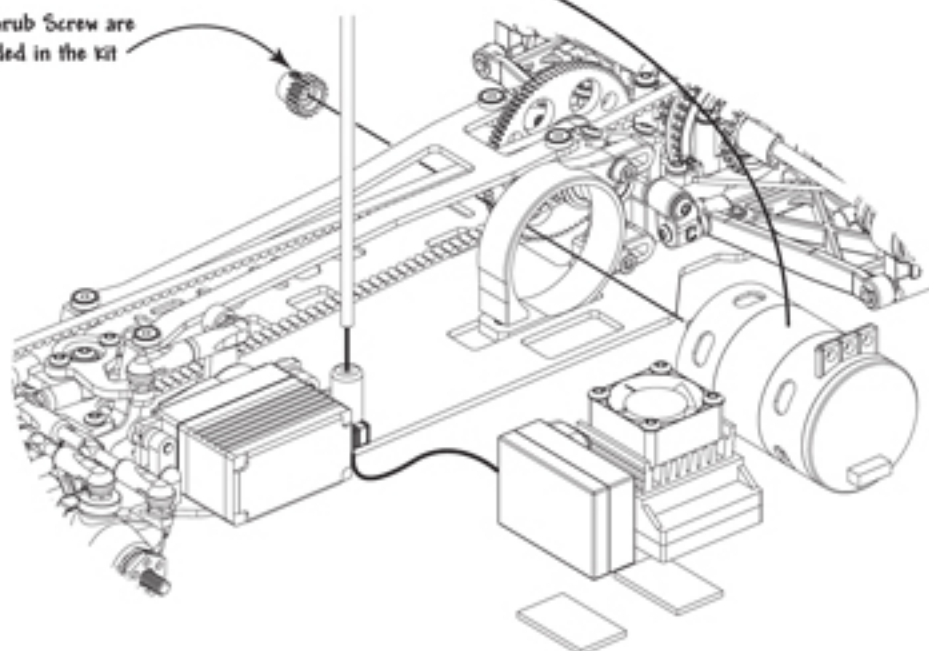
Screw supplied
with Servo

90°
At Neutral



Insert motor into clamp
and tighten the clamp screw
underneath the car
Then adjust the
gear mesh

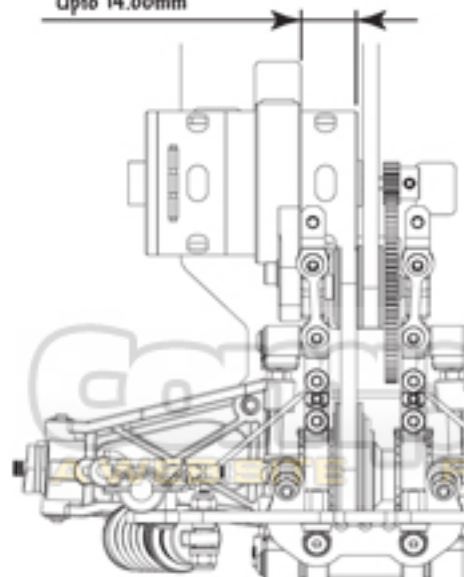
Pinion and Grub Screw are
NOT included in the kit



Drivetrain Option 1

Motor Position With Spur and Pinion
tooth sum of 109 or GREATER

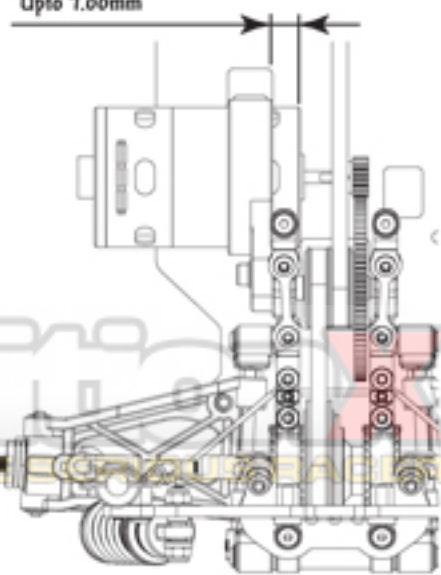
Upto 14.00mm



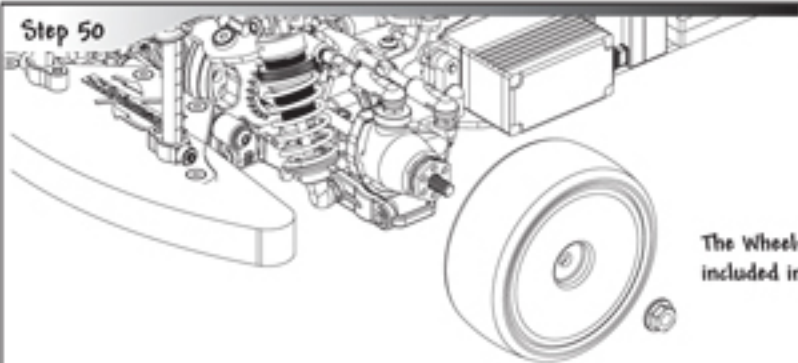
Drivetrain Option 1

Motor Position With Spur and Pinion
tooth sum of LESS than 109

Upto 7.00mm



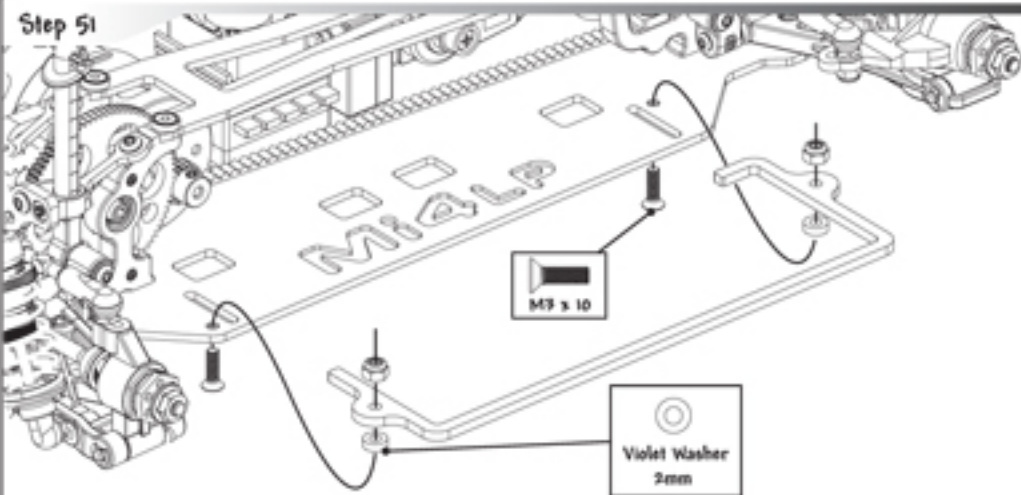
Step 50



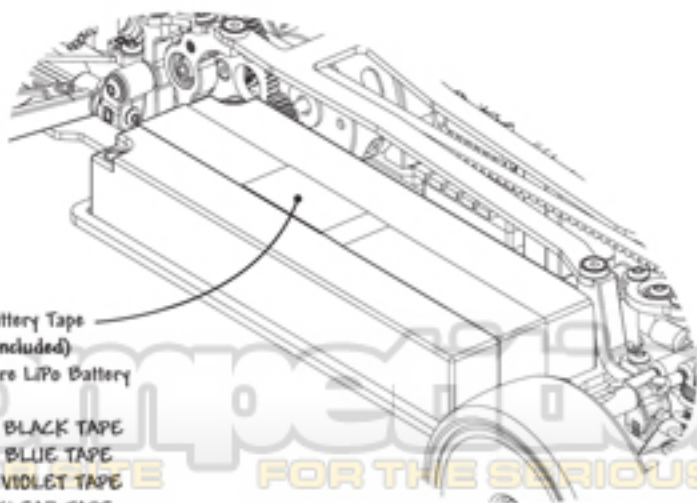
MIALP

The Wheels and Tyres are NDT included in the Kit.

Step 51



Humped LiPo Installation With Tape



Use Battery Tape
(NDT Included)
to secure LiPo Battery

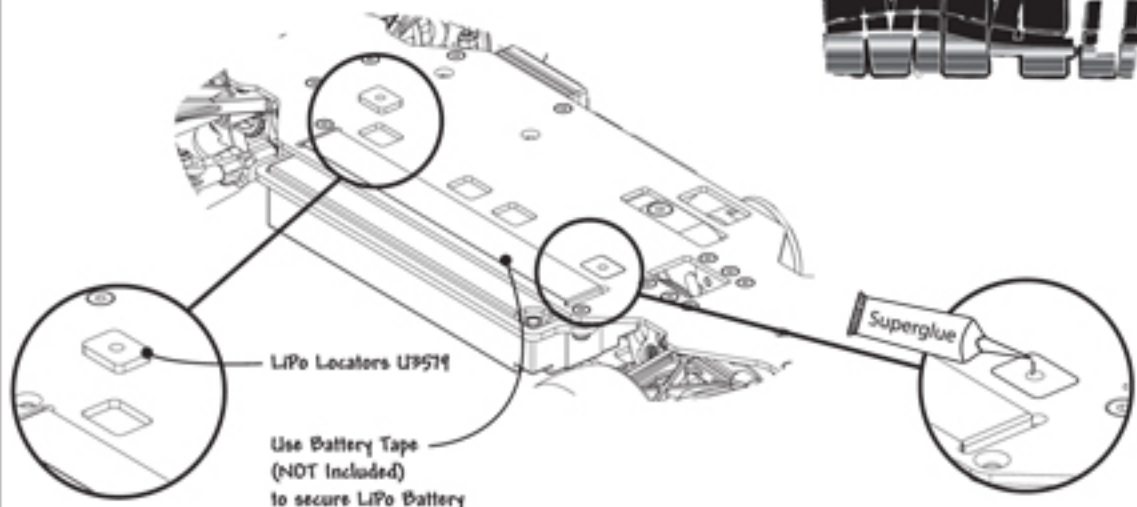
CR005 BLACK TAPE

CR006 BLUE TAPE

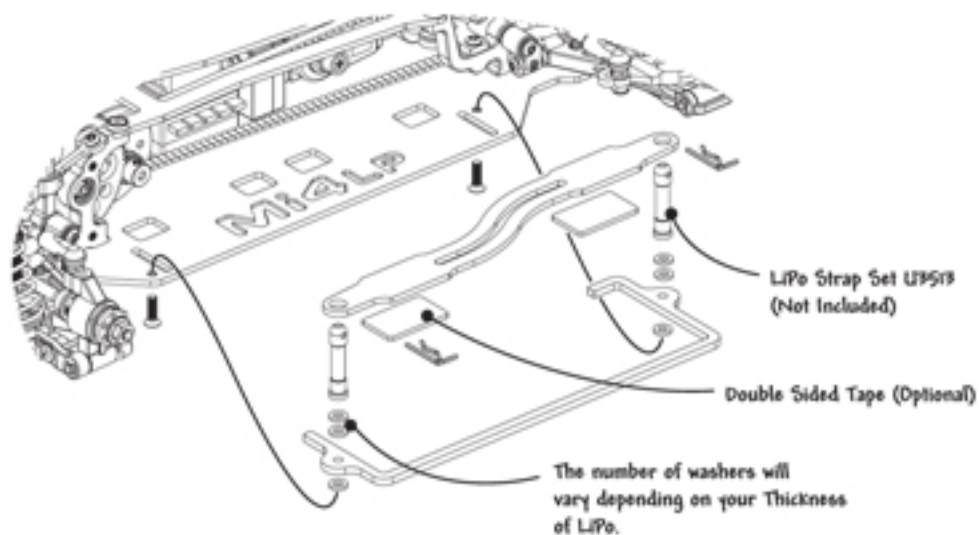
CR031 VIOLET TAPE

H1034 CLEAR TAPE

CompetitionX
A V.I.P. FOR THE SERIOUS RACER



LiPo Tray Installation with Strap for LiPo's

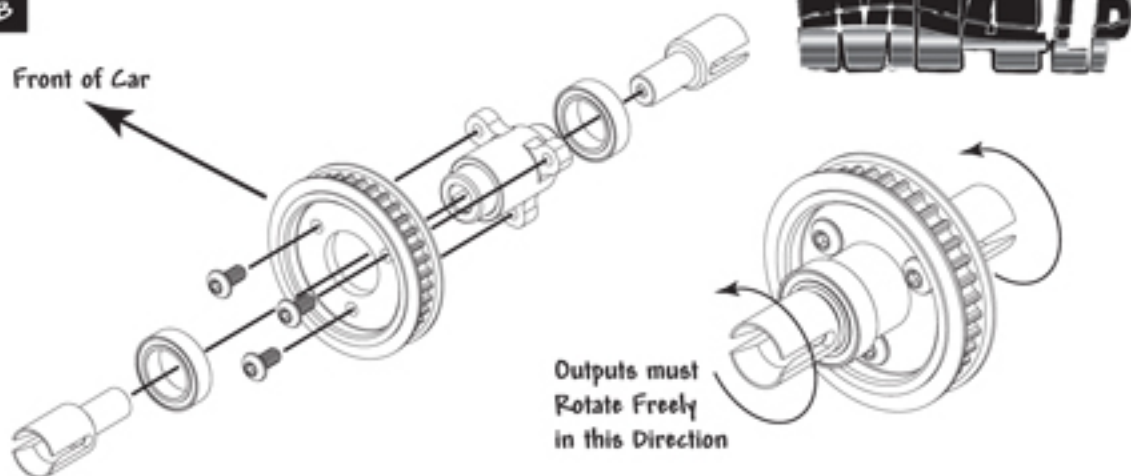


Optional One Way U3531 For Drivetrain Option 1 (see page 3)



Optional One Way U3531 For Drivetrain Option 1 (see page 3)

B



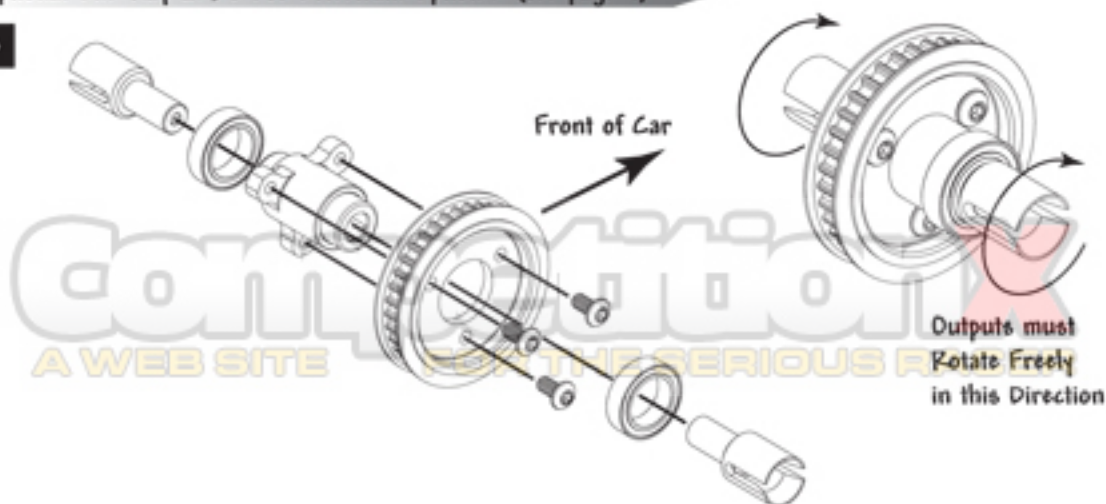
Optional One Way U3518 For Drivetrain Option 2 (see page 4)

A



Optional One Way U3518 For Drivetrain Option 2 (see page 4)

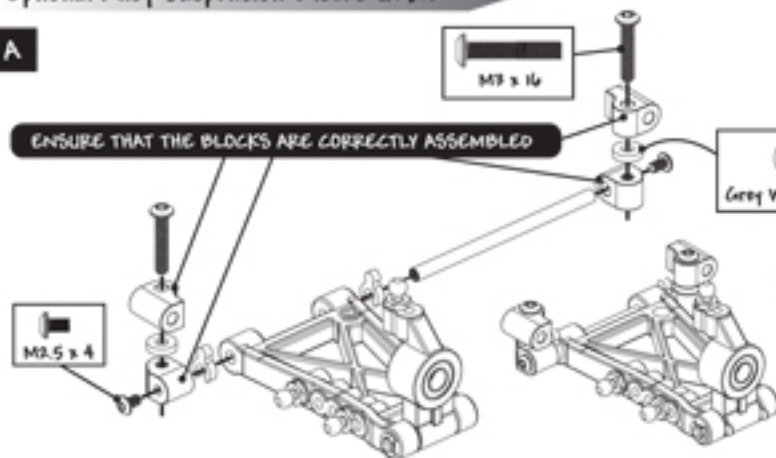
B



Optional Alloy Suspension Blocks U3517



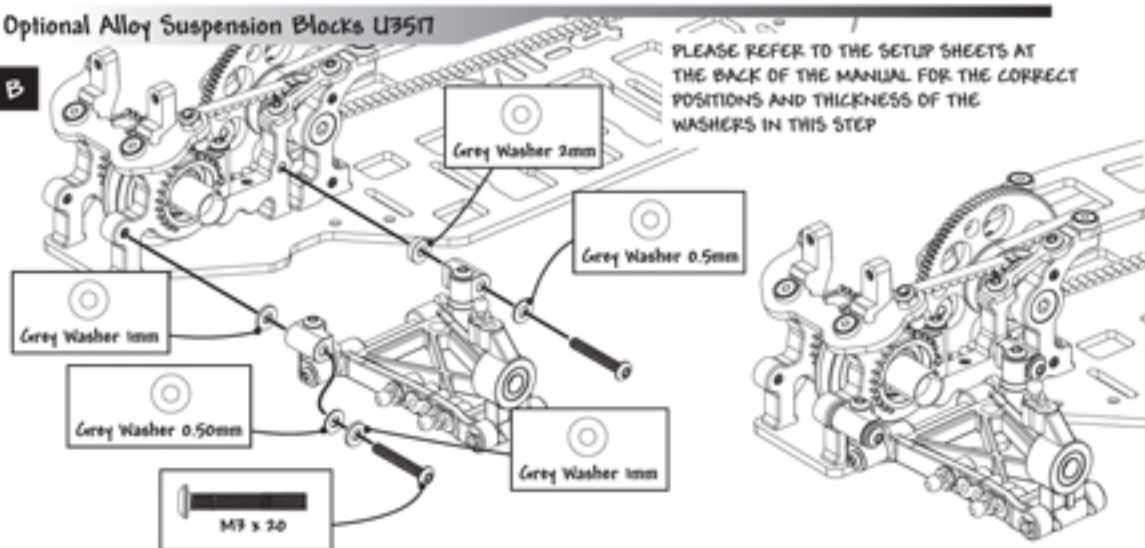
A



PLEASE REFER TO THE SETUP SHEETS AT THE BACK OF THE MANUAL FOR THE CORRECT POSITIONS AND THICKNESS OF THE WASHERS IN THIS STEP

Optional Alloy Suspension Blocks U3517

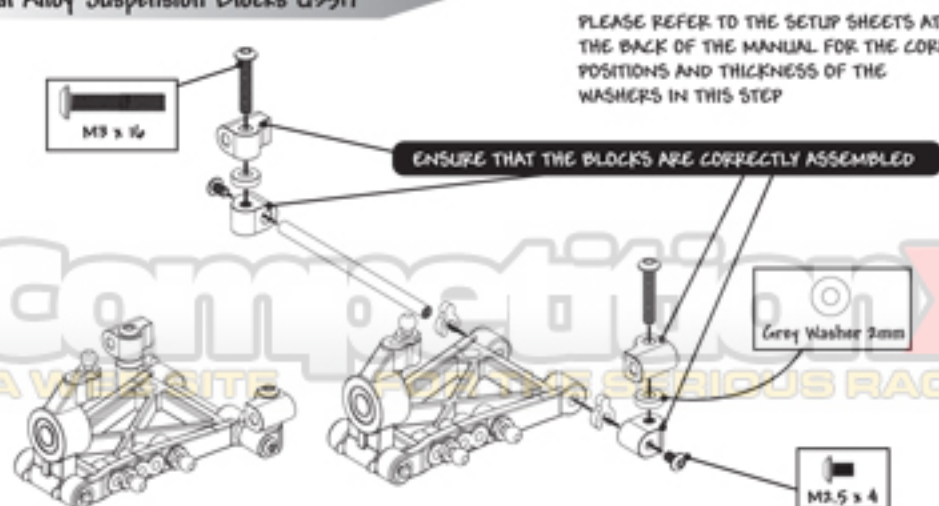
B



PLEASE REFER TO THE SETUP SHEETS AT THE BACK OF THE MANUAL FOR THE CORRECT POSITIONS AND THICKNESS OF THE WASHERS IN THIS STEP

Optional Alloy Suspension Blocks U3517

C



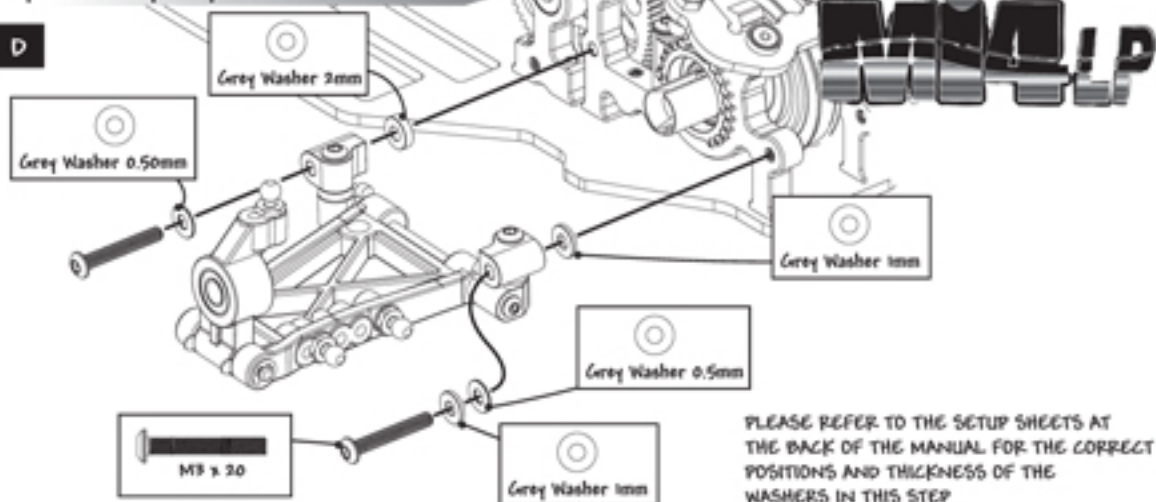
PLEASE REFER TO THE SETUP SHEETS AT THE BACK OF THE MANUAL FOR THE CORRECT POSITIONS AND THICKNESS OF THE WASHERS IN THIS STEP

ENSURE THAT THE BLOCKS ARE CORRECTLY ASSEMBLED

COMPETITIONX
A VIBRANT SITE FOR SERIOUS RACERS

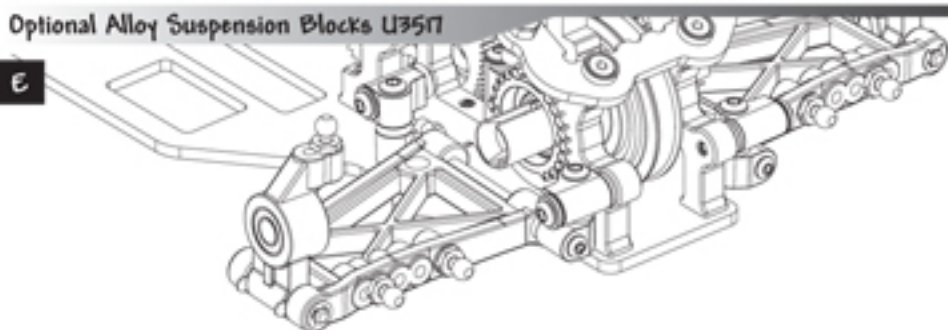
Optional Alloy Suspension Blocks U3517

D



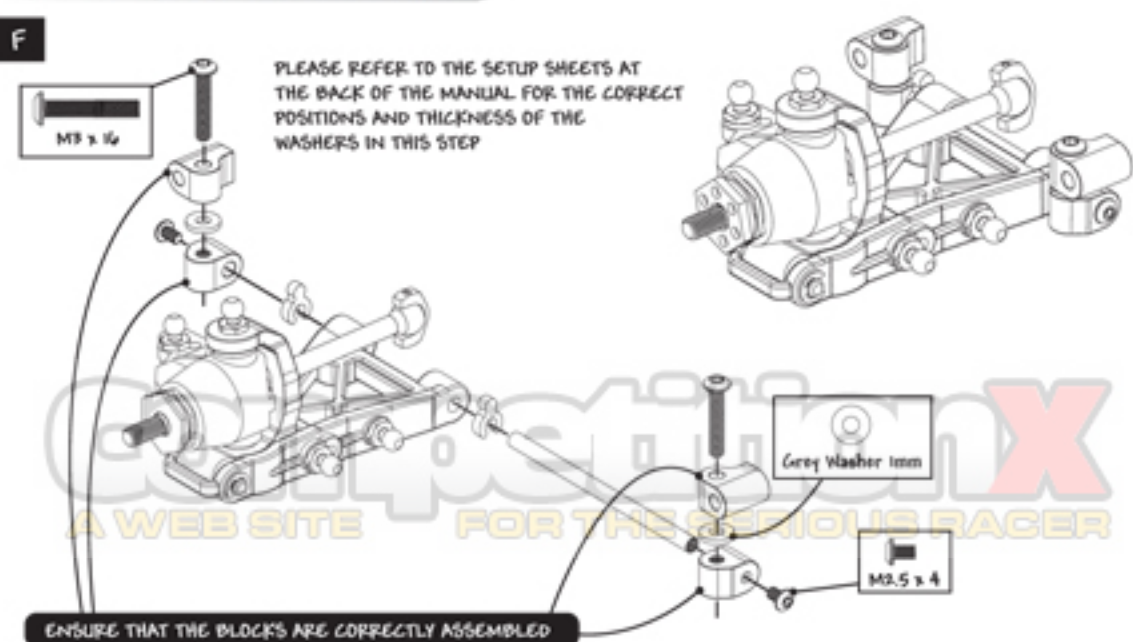
Optional Alloy Suspension Blocks U3517

E



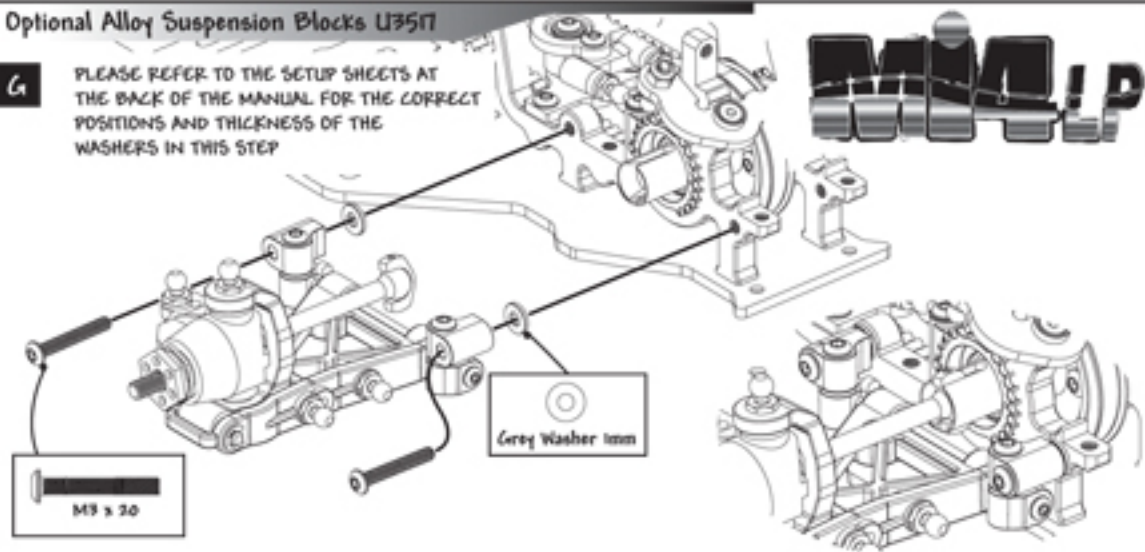
Optional Alloy Suspension Blocks U3517

F



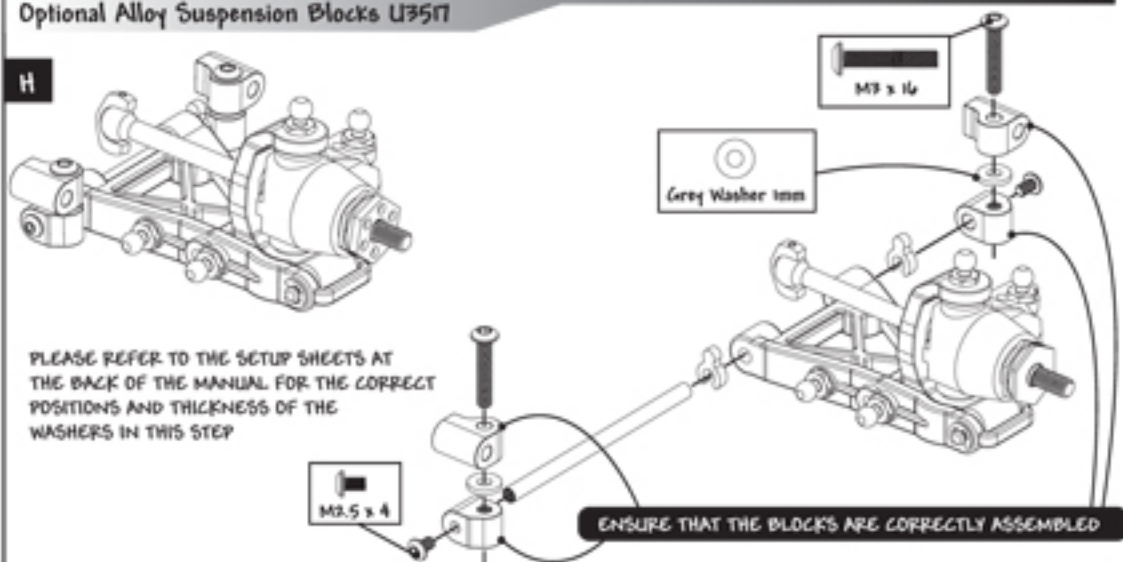
Optional Alloy Suspension Blocks U3517

G PLEASE REFER TO THE SETUP SHEETS AT THE BACK OF THE MANUAL FOR THE CORRECT POSITIONS AND THICKNESS OF THE WASHERS IN THIS STEP



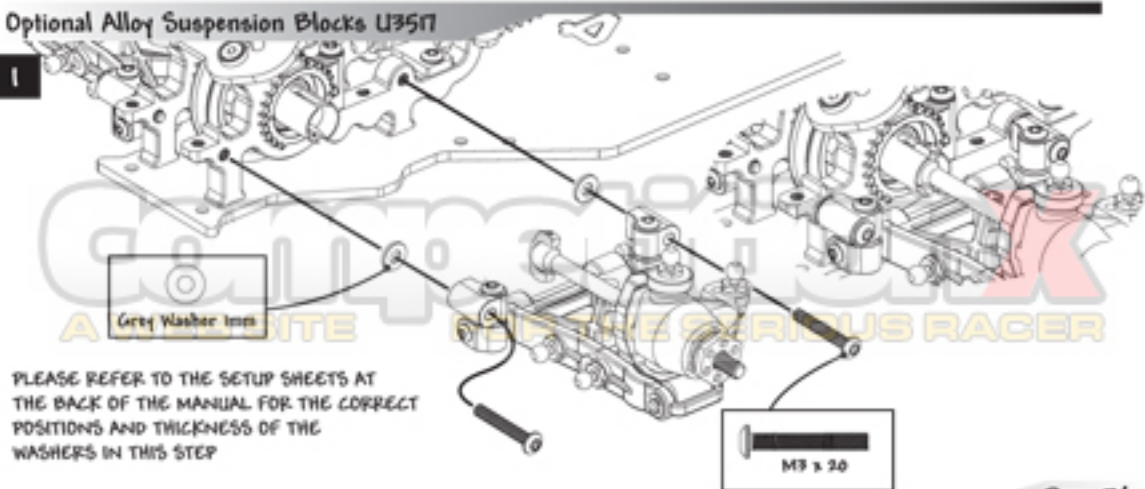
Optional Alloy Suspension Blocks U3517

H PLEASE REFER TO THE SETUP SHEETS AT THE BACK OF THE MANUAL FOR THE CORRECT POSITIONS AND THICKNESS OF THE WASHERS IN THIS STEP



Optional Alloy Suspension Blocks U3517

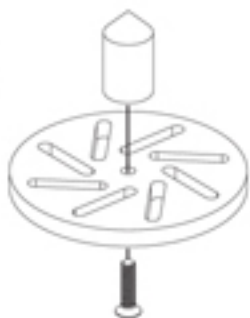
I PLEASE REFER TO THE SETUP SHEETS AT THE BACK OF THE MANUAL FOR THE CORRECT POSITIONS AND THICKNESS OF THE WASHERS IN THIS STEP



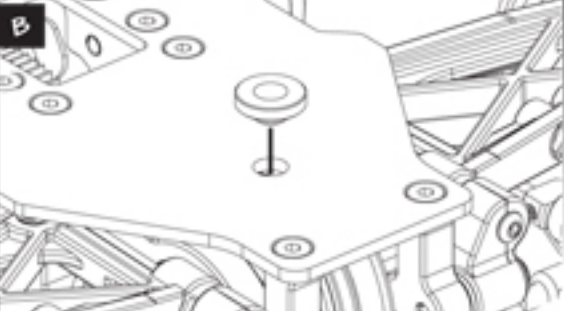
Car Balancing Jig U3582

A The Balancing Jig, with the aid of a pair of scales, is used to accurately and independently measure the corner weights of your car.

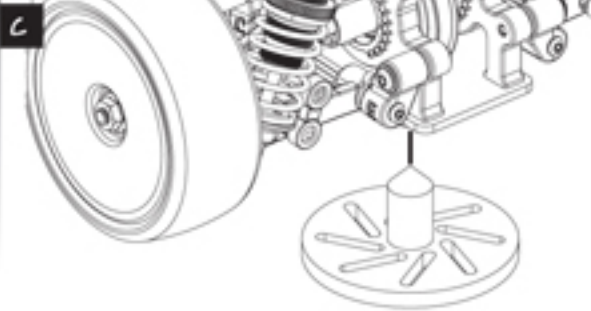
We use a Three point balancing system to eliminate any false readings caused by chassis tweak.



Car Balancing Jig U3582



Car Balancing Jig U3582



Car Balancing Jig U3582

D

First you must accurately set the ride height of your car.

Then place the Pivot Bush in the chassis hole (B).

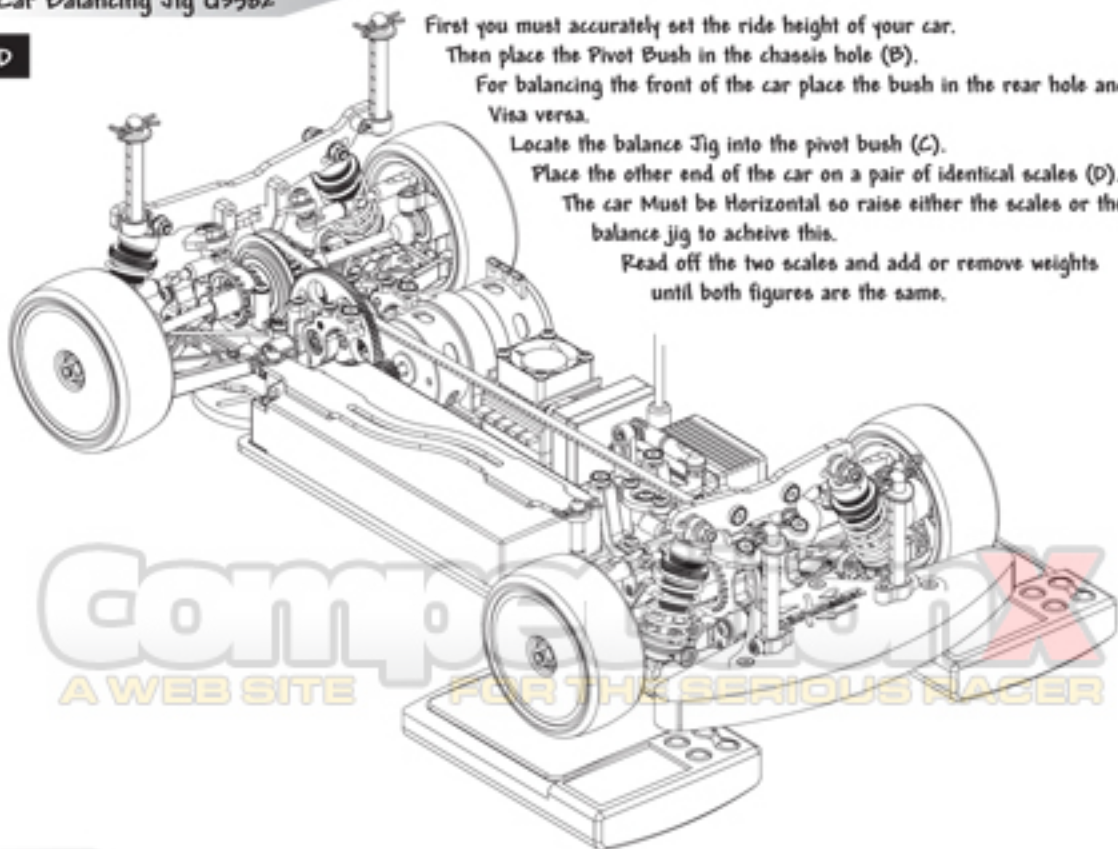
For balancing the front of the car place the bush in the rear hole and Visa versa.

Locate the balance Jig into the pivot bush (C).

Place the other end of the car on a pair of identical scales (D).

The car Must be Horizontal so raise either the scales or the balance jig to achieve this.

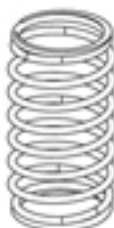
Read off the two scales and add or remove weights until both figures are the same.



Track Settings

Springs

The spring rate controls the suspension stiffness. Spring adjusters only change the ride height. They DO NOT alter the suspension stiffness. On slippery or bumpy tracks use soft to medium rate springs, on flat or high grip tracks run medium to hard rate springs.



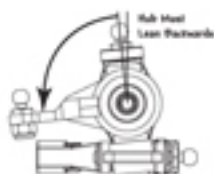
Steering

By Adding and removing the washers under the ball joint, you alter the cars Ackerman and steering response. Adding washers will make the steering more aggressive, where less washers will make for a softer response.



Front Caster

The front caster can be altered by changing the yoke. The car comes with 4° caster as standard. Less caster will give a quicker steering response, but could lead to power on understeer. More caster will give the opposite, slightly slower turn in, but more power on steering.



Shock Brackets (Shock Mounting)

Vertical shock absorbers make the car react sharply to driver inputs.

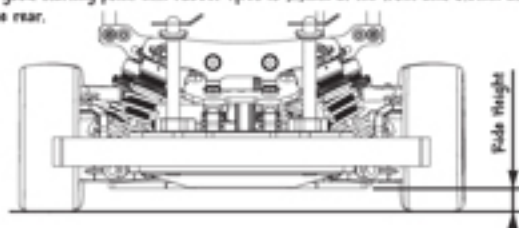


A laydown shock offers a softer feel to the driver.

Ride Height

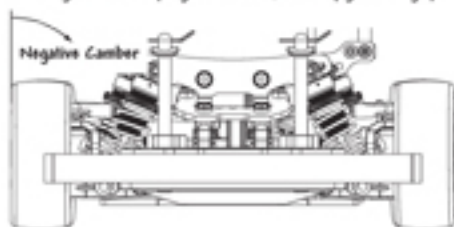
In general always run the car as low as possible, without the chassis grounding out, as it rolls into corners.

A good starting point with rubber tyres is 5.5mm at the front and 6.0mm at the rear.



Front and Rear Camber

With maximum negative camber the car will have high levels of grip, but there may be the possibility of sudden breakaway in corners. Reducing the camber gives a more progressive slide, but may give less grip.



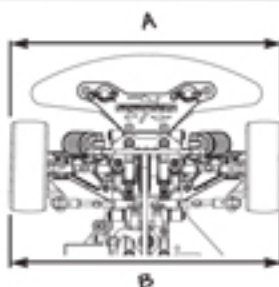
Front Toe-in

The front toe-in is set by adjusting the steering trackrod turnbuckles.

Toe-In = A less than B
Toe-Out = A greater than B

Toe-in will give a more stable car, but will give less sharp turn in. Toe-out will give the opposite, less stability with sharper turn in to the corners.

We recommend to start at about 0° or 1° toe-out.



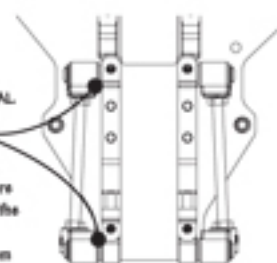
Front and Rear Track Width

TRACK WIDTH ADJUSTMENT (in-board)

The track width of the car may be altered by adding or removing EQUAL thickness grey suspension washers between the Screw blocks and the transmission housings.

When changing the track width ensure the driveshafts are fully engaged in the Diff outputs.

And the width does not exceed 140mm

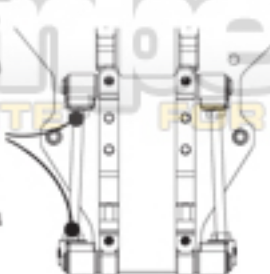


Front and Rear Wheelbase

WHEELBASE ADJUSTMENT (in-board)

The wheelbase may be adjusted by moving the Quick Clips to either the front or the back of the wishbones.

Shorter wheelbase results in a more agile car, but use longer wheelbase for a smoother less aggressive car. Also moving the wishbone forwards and backwards alters the weight distribution at either end of the car, this results in more or less traction, and more or less steering.



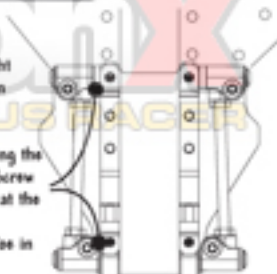
Front and Rear Inboard Toe-in

USING OPTIONAL ALLOY PIVOT BLOCKS

More inboard toe in will improve straight ahead traction and car stability, but can reduce corner speed on fast sweepers.

The toe-in is set by adding or removing the grey suspension washers between the Screw blocks and the transmission housings, at the front or rear of the wishbones.

Each 0.50mm washer will change the Toe in by Approx 0.60°





Following on from the hugely successful UDC20 this is a rapid charger with high performance microprocessor and specialized operating software for multifunctional operation.

Operating voltage range: DC 11v - 18v
 AC to DC adaptor (DC 11v-18v/5A)
 Circuit Power: Max charge power 50W
 Charge current range: 0.1-5A
 Discharge current range: 0.1-1A
 Current drain for balancing Li-po: 300mAh/cell
 NiCad/NiMH battery cell count: 1-75cells
 Li-ion/Polymer cell count: 1-6 series
 Pb battery voltage: 2v-20v
 Weight: 265g
 Dimensions: 173.2x80.4x39mm
 Lead Acid: 2v - 20v

- Internal Independent Lithium Battery Balancer
- Balancing individual cells battery discharging
- Adaptable to various types of lithium battery
- The UDC30 is adaptable to various types of Lithium batteries, including LiPo, Li-ion and the new LiFe battery.
- Fast and Storage mode of lithium battery
- Large range of safety features to prevent overcharge of battery.
- Huge range of leads included.
- Cool blue backlit display.
- Separate 240/12v Power supply available (CR105)

CR104

UDC30 Universal
Balance Charger

CR105

Power Supply
UDC 30 - UK Plug



CR005 - Battery Strapping Tape - Black
 CR006 - Battery Strapping Tape - Blue
 CR007 - Battery Strapping Tape - Purple



CR099 - Core Safe Charge Pouch Small 18x23cm
 CR098 - Core Safe Charge Pouch Large 23x30cm



CR001 - CORE RC Sili Wire 12g Red/Blk
 CR050 - CORE RC Sili Wire 12g-1m Red
 CR051 - CORE RC Sili Wire 12g-1m Black
 CR052 - CORE RC Sili Wire 12g-1m Blue



Core Servo:
 Low Profile 8.4Kg
 Titanium Metal Gear
 2 x Ball Bearings
 0.11sec/vodog at 6.0v
 Great servo for competition touring cars.
 Weighs only 35 grams.

CR116 - CORE Servo Low Pro Digital

CR100 - Shock Shaft Pliers - Purple
 CR101 - Shock Shaft Pliers - Black



CR102 - Magnetic Parts Tray - Purple
 CR103 - Magnetic Parts Tray - Black



Following on from the hugely successful UDC20 this is a rapid charger with high performance microprocessor and specialized operating software for multifunctional operation.

Operating voltage range: DC 11v - 18v
 AC to DC adaptor (DC 11v-18v/5A)
 Circuit Power: Max charge power 50W
 Charge current range: 0.1-5A
 Discharge current range: 0.1-1A
 Current drain for balancing Li-po: 300mA/cell
 NiCad/NiMH battery cell count: 1-75cells
 Li-ion/Polymer cell count: 1-4 series
 PD battery voltage: 2v-20v
 Weight: 245g
 Dimensions: 173.2x80.6x77mm
 Lead Acid: 2v - 20v

- Internal Independent Lithium Battery Balancer
- Balancing individual cells battery discharging
- Adaptable to various types of lithium battery
- The UDC30 is adaptable to various types of Lithium batteries, including LiPo, Li-ion and the new LiFe battery.
- Fast and Storage mode of lithium battery
- Large range of safety features to prevent overcharge of battery.
- Vuge range of leads included.
- Cool blue backlit display.
- Separate 240/12v Power supply available (CR105)

CR104 UDC30 Universal Balance Charger

CR105 Power Supply UDC 30 - UK Plug



CR005 - Battery Strapping Tape - Black
 CR006 - Battery Strapping Tape - Blue
 CR007 - Battery Strapping Tape - Purple



CR099 - Core Safe Charge Pouch Small 18x32cm
 CR094 - Core Safe Charge Pouch Large 27x30cm



CR007 - CORE RC Sili Wire 12g Red/Blk
 CR050 - CORE RC Sili Wire 12g-1m Red
 CR051 - CORE RC Sili Wire 12g-1m Black
 CR052 - CORE RC Sili Wire 12g-1m Blue



Core Servo:
 Low Profile 8.4Fg
 Titanium Metal Gear
 2 x Ball Bearings
 0.11secs/10deg at 6.0v

Great servo for competition touring cars.
 Weighs only 7.5 grams.

CR116 - CORE Servo Low Pro Digital

CR100 - Shock Shaft Pliers - Purple
 CR101 - Shock Shaft Pliers - Black



CR102 - Magnetic Parts Tray - Purple
 CR103 - Magnetic Parts Tray - Black