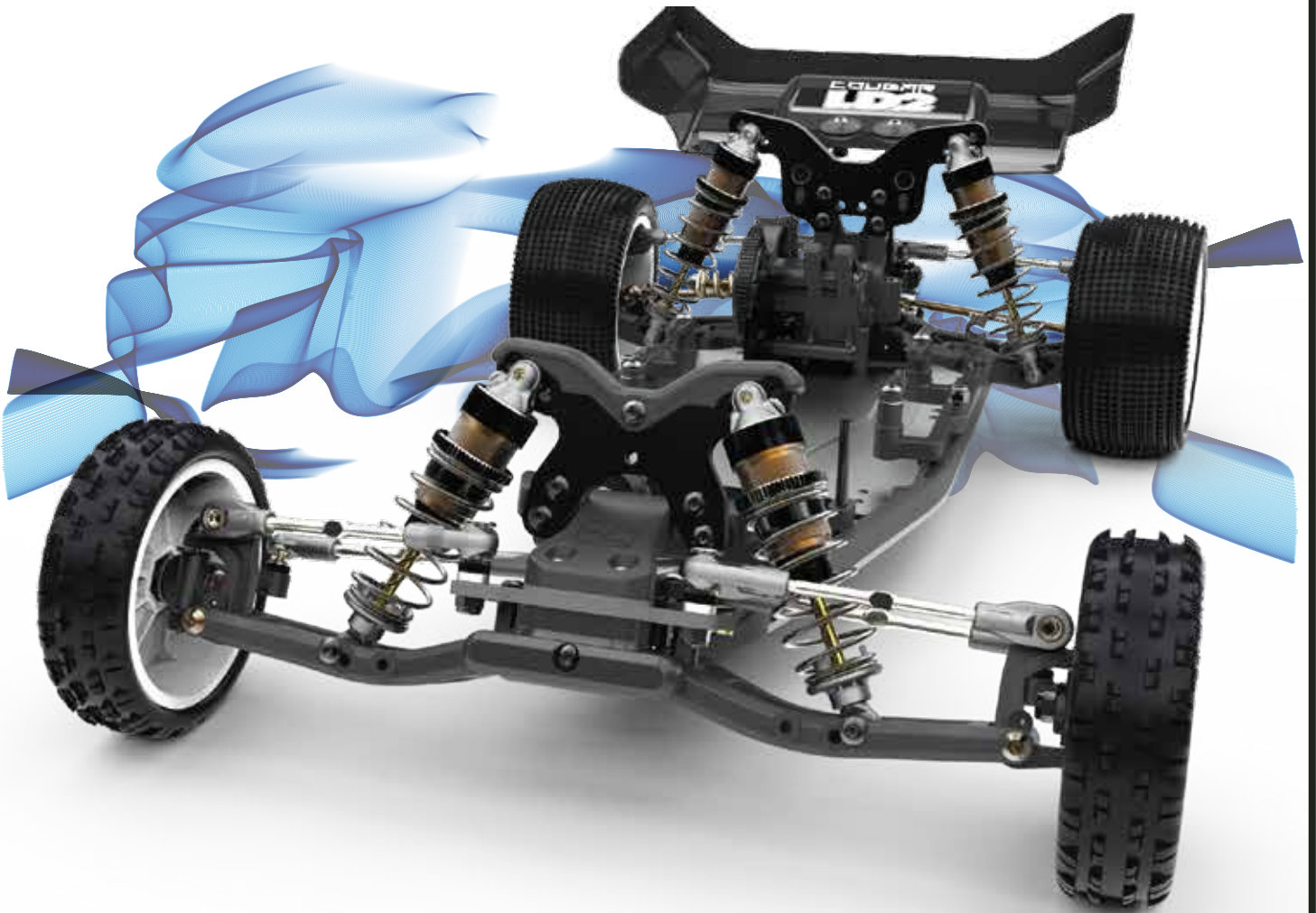


COUGAR LD2



Instruction Manual ISS01



www.racing-cars.com

Schumacher

71-73 Tenter Road
Moulton Park
Northampton
NN3 6AX

IMPORTANT SAFETY NOTES

- We strongly recommend that anyone driving RC cars, or organising events, should obtain third party liability insurance. In the UK this can be done by joining the BRCA. www.brca.org
- This product is not suitable for children under the age of 14, without the direct supervision of a responsible 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 items used in the construction.
- In line with our policy of continuous development the exact details of the kit may vary.
- DO NOT use this car on public roads or in places where it can interfere with traffic, people or animals.
- Always check the operation of the radio with the wheels off the ground, before using the car.
- Make sure the radio and car batteries are fully charged before use.
- Disconnect and remove the battery from the car when not in use.
- Always store and charge LiPo batteries in a fireproof container.
- DO NOT put fingers or any objects inside rotating or moving parts as this may cause injury.
- Make sure the charger is correctly set for the type of battery you are using.
- Incorrect charging may cause a fire.
- Insulate all exposed electrical wiring. Exposed or damaged wires can cause short circuits and fire.
- The motor and speed controller can become hot during use. DO NOT touch them immediately after using your car as this may cause injury.

ADDITIONAL ITEMS REQUIRED



Radio Equipment



Motor and Pinion Gear



2S Shorty LiPo



Battery Charger



Steering Servo



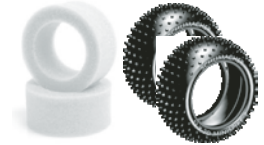
Electronic Speed Controller



Pro Tyre Glue



Polycarbonate Paint



Tyres and Inserts

TOOLS REQUIRED

1.5mm Hex Driver - U2789

2.0mm Hex Driver - U2790

2.5mm Hex Driver - U2791

3.0mm Hex Driver - U2792

5.5mm M3 Nut Driver - U2795

7.0mm M4 Nut Driver - U2796

Body Reamer - U2818

Pliers - CR528

Side Cutters - CR527

Soldering Iron - CR275

Solder - U3107

Curved Scissors - CR044



ICON KEYS

LITHIUM GREASE CORE RC High Performance Lithium Grease 10ml - CR752

THREAD LOCK CORE RC Medium Thread Lock 3ml - CR520

CA GLUE CORE RC 522 Pro Tyre Glue 20g + 2 Nozzles - CR522



Caution/Important note. Please read.



Left-Hand Side of car



Right-Hand Side of car



Additional information that will help you build a faster race car.

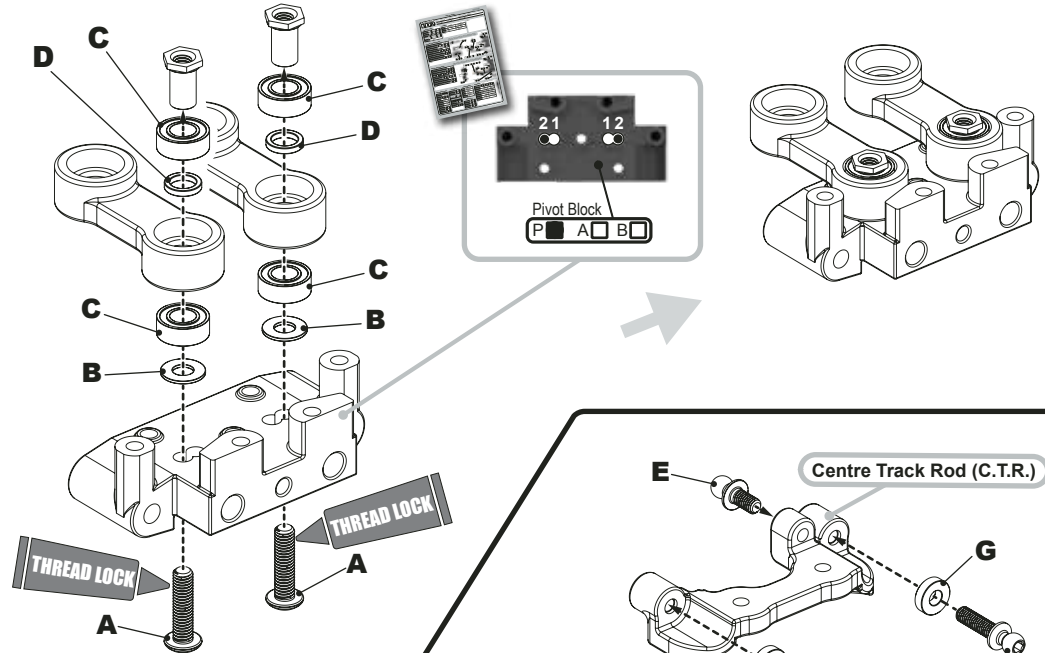


Set up Sheet - Refer to page 40.



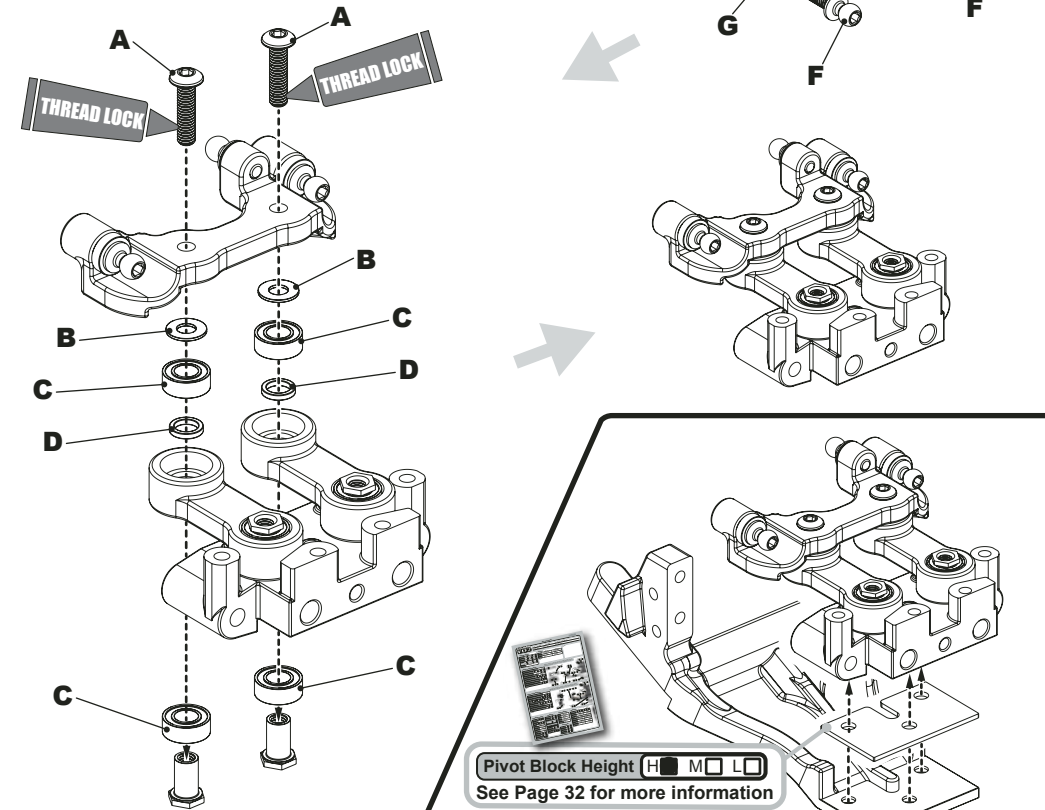
BAG A - Step 01

- A x2** M3x 12 Button Hd Screw
- B x2** M3 Alloy Spacer 0.75mm
- C x4** Ø4 x Ø8 x 3mm Bearing
- D x2** Ø4 x Ø5.6mm Shim



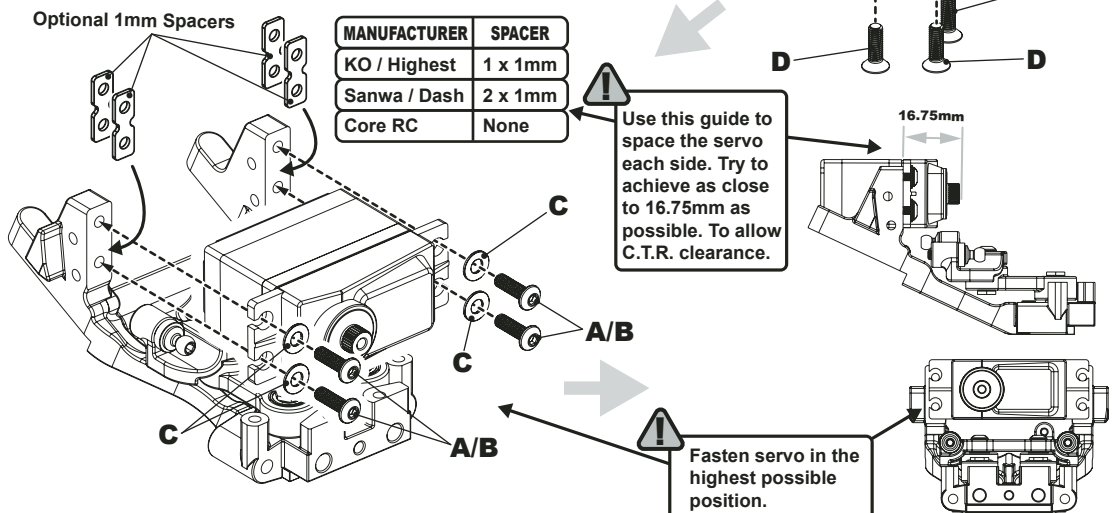
BAG A - Step 02

- A x2** M3x 12 Button Hd Screw
- B x2** M3 Steel Washer
- C x4** Ø4 x Ø8 x 3mm Bearing
- D x2** Ø4 x Ø5.6mm Shim
- E x1** Short Ball Stud Low
- F x2** Extra Long Ball Stud
- G x2** Grey Spacer 2mm



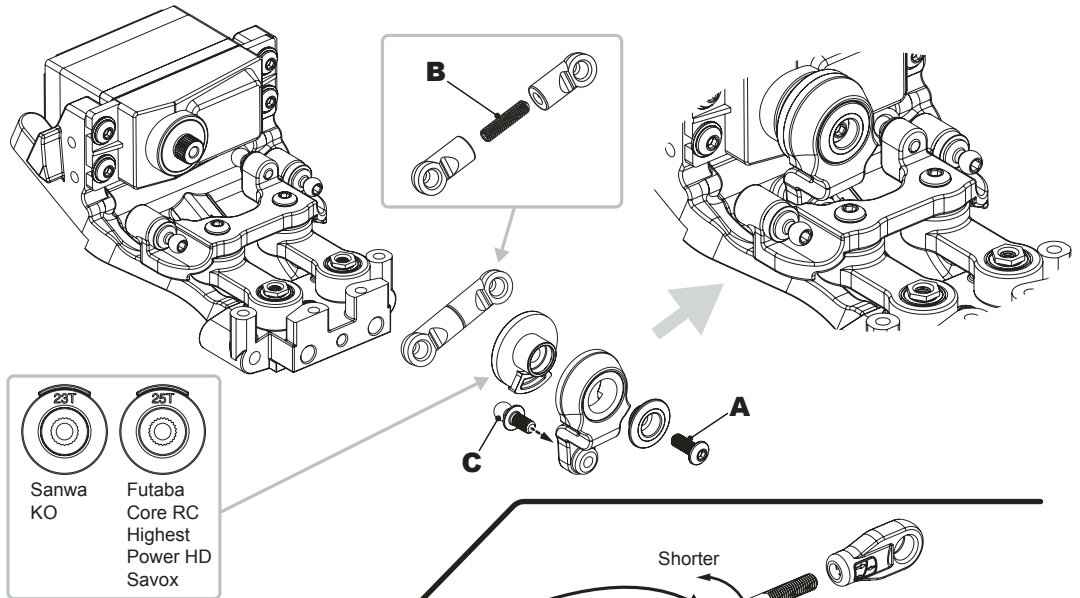
BAG A - Step 03

- A x4** M3x 10 Button Hd Screw
- B x4** M3x 12 Button Hd Screw (Use these if using both of the optional 1mm spacers)
- C x4** M3 Steel Washer
- D x3** M3x 10 Csk Hd Screw



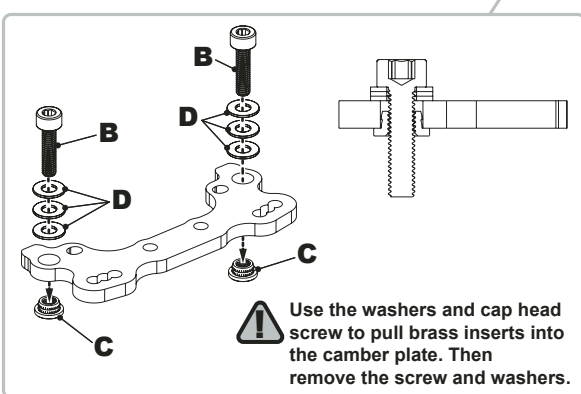
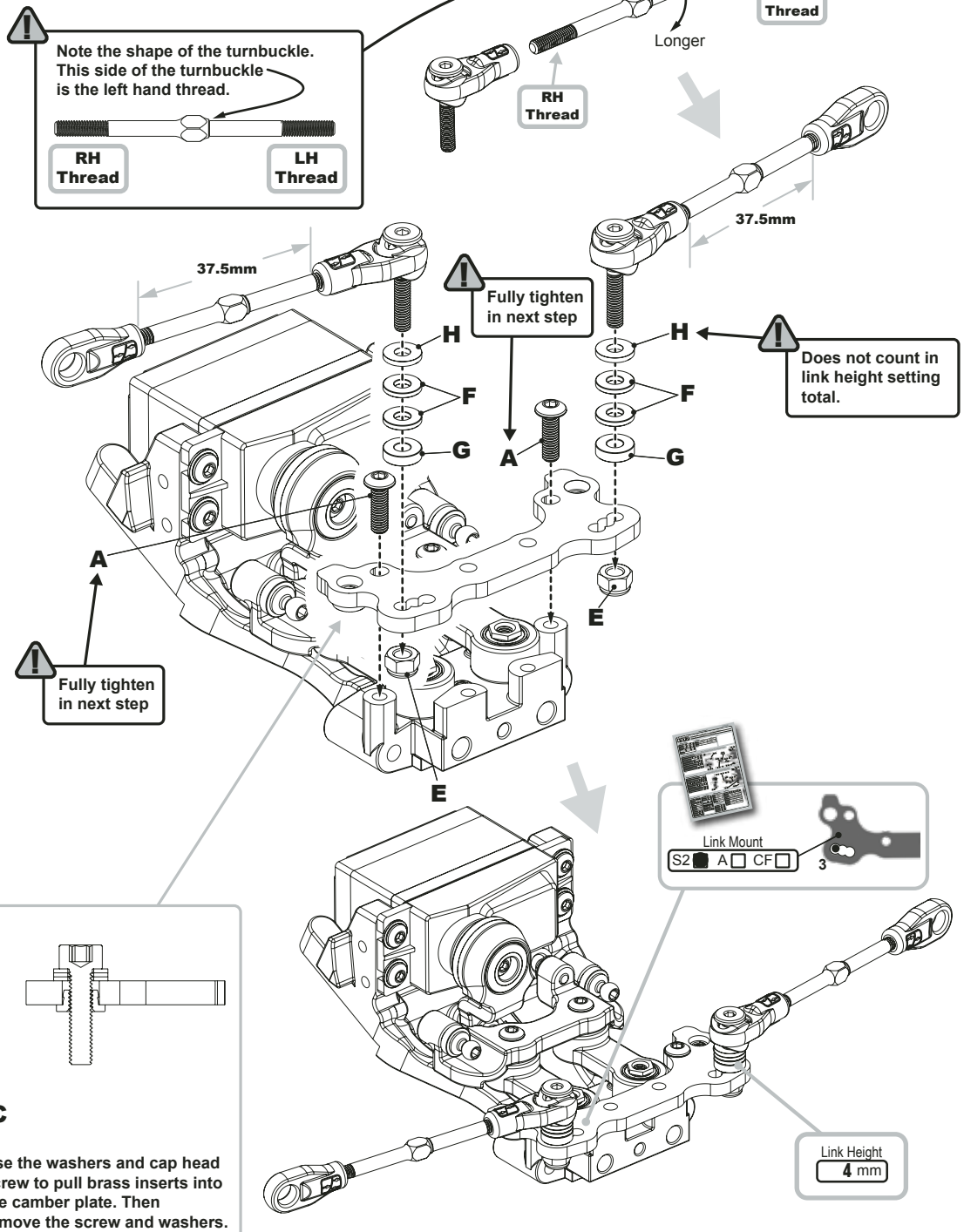
BAG A - Step 04

- A x1** M3x 8 Button Hd Screw
- B x1** M3x 12 Grub Screw
- C x1** Short Ball Stud Low



BAG A - Step 05

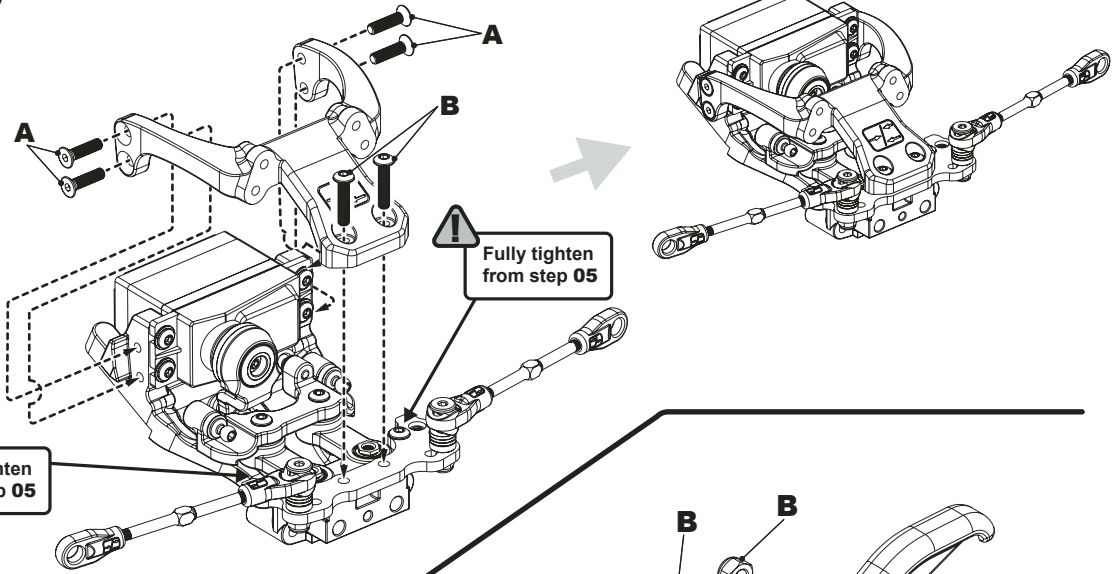
- A x2** M3x 10 Button Hd Screw
- B x1** M3x 12 Cap Hd Screw
- C x2** M3 Brass Insert
- D x3** M3 Washer
- E x2** M3 Nyloc Nut
- F x4** 1.0mm Spacer
- G x2** 2.0mm Spacer
- H x2** Ball Stud Washer (Shiny, magnetic)



BAG A - Step 06

A x4 M3x 12 Csk Hd Screw

B x2 M3x 14 Button Hd Screw

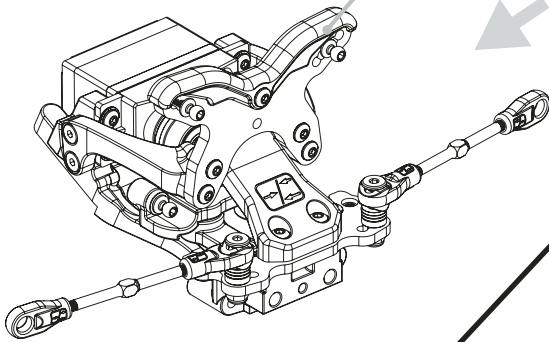
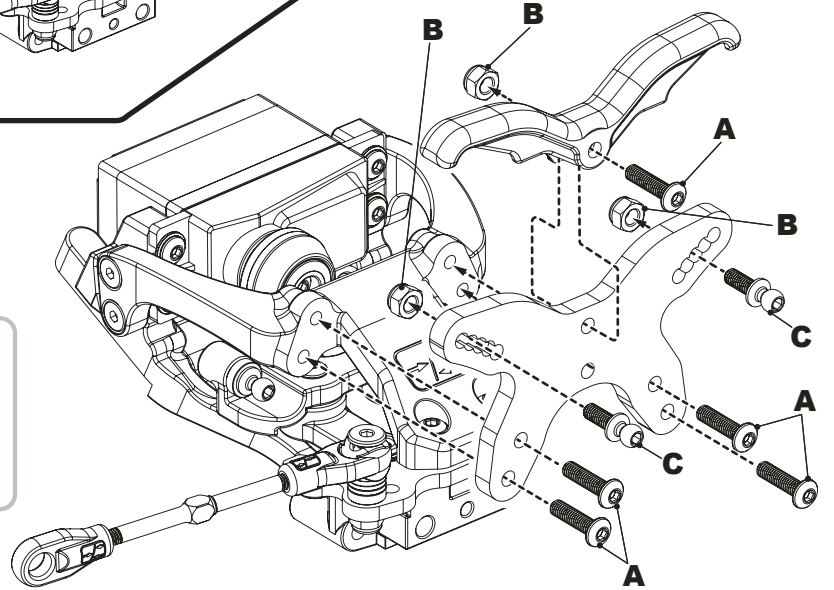
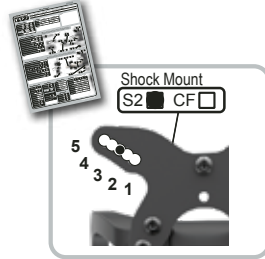


BAG A - Step 07

A x5 M3x 12 Button Hd Screw

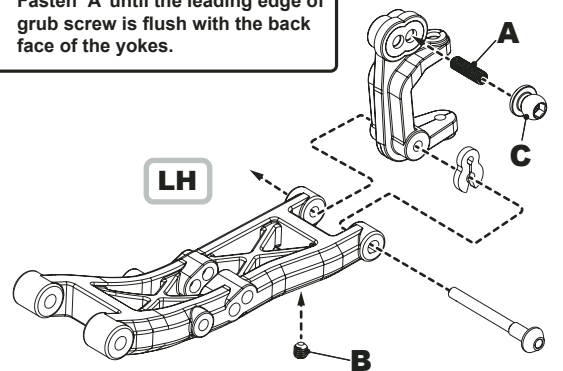
B x3 M3 Nyloc Nut

C x2 Pro Ball Stud Long



RACE TIP
Do not overtighten the grub screw **B**. STOP when you feel it meet the flat of the pin.

Fasten 'A' until the leading edge of grub screw is flush with the back face of the yokes.

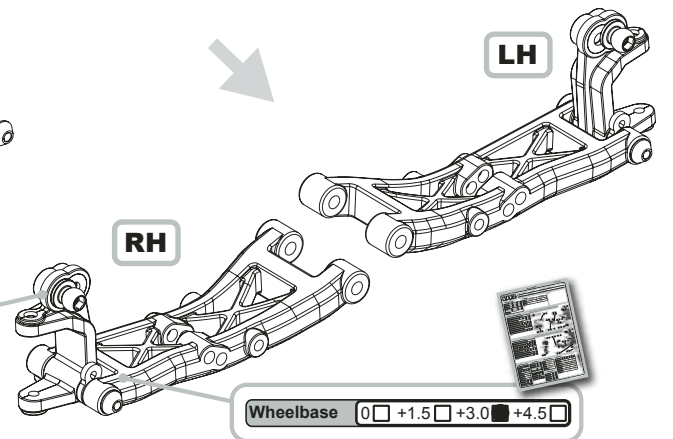
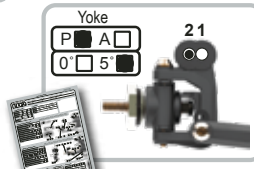
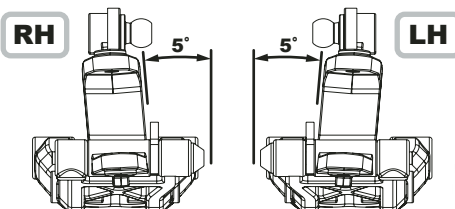
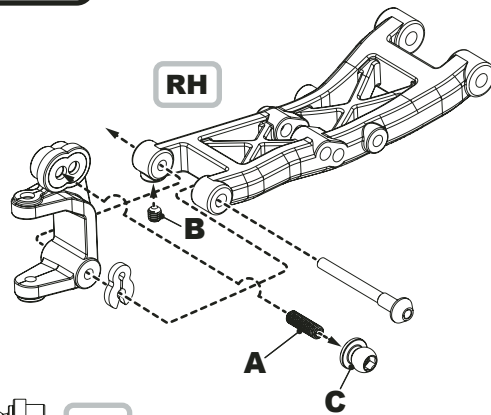


BAG A - Step 08

A x2 M3x 10 Grub Screw


B x2 M3x 3 Grub Screw


C x2 Pivot Ball

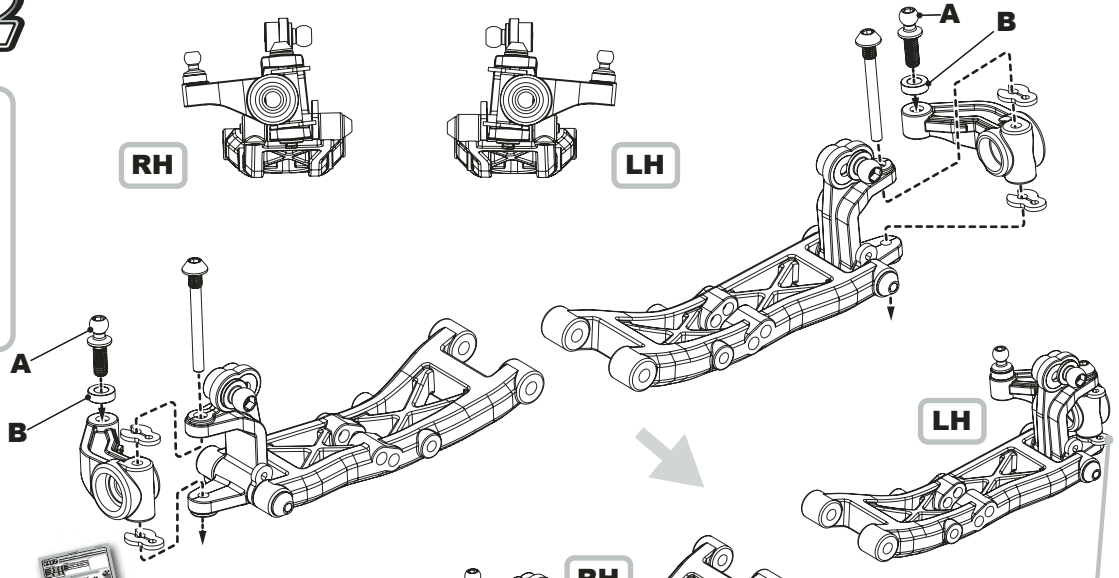


Wheelbase 0 +1.5 +3.0 +4.5


BAG A - Step 09


A x2  Long Ball Stud


B x2  2.0mm Spacer




BAG B - Step 10

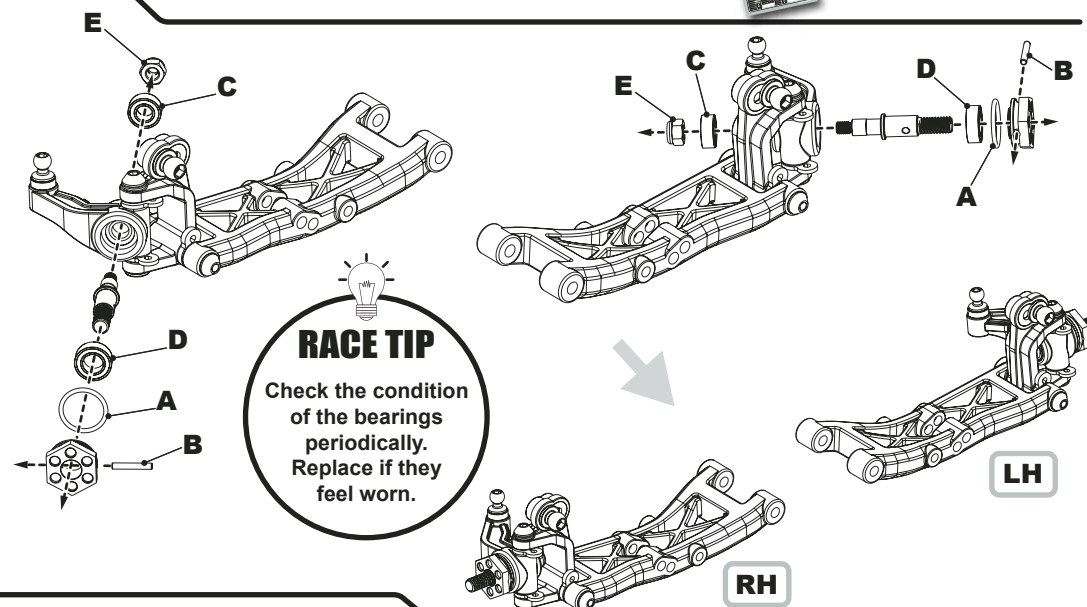
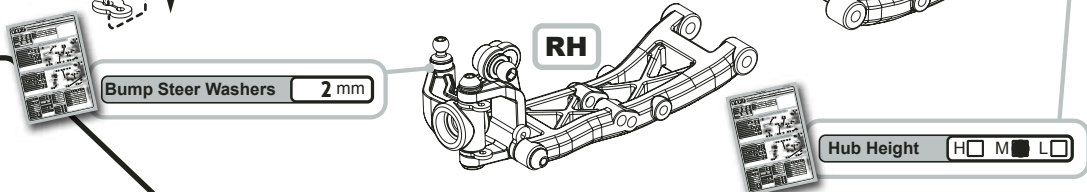
A x2  'O' Ring 9.0mm x 1.0mm

B x2  Ø1.5 x 9.8mm Pin

C x2  Ø4 x Ø8 x 3mm Bearing

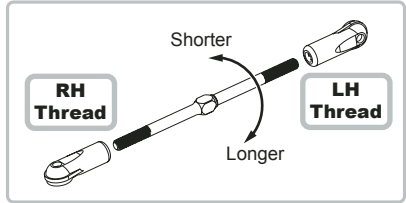
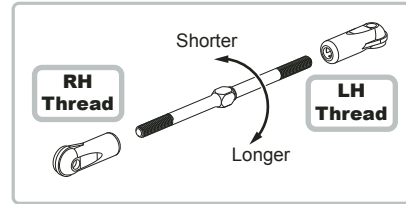
D x2  Ø5 x Ø9 x 3mm Bearing

E x2  M3 Nyloc Nut

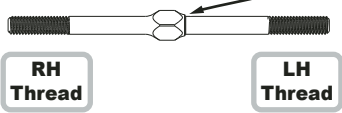
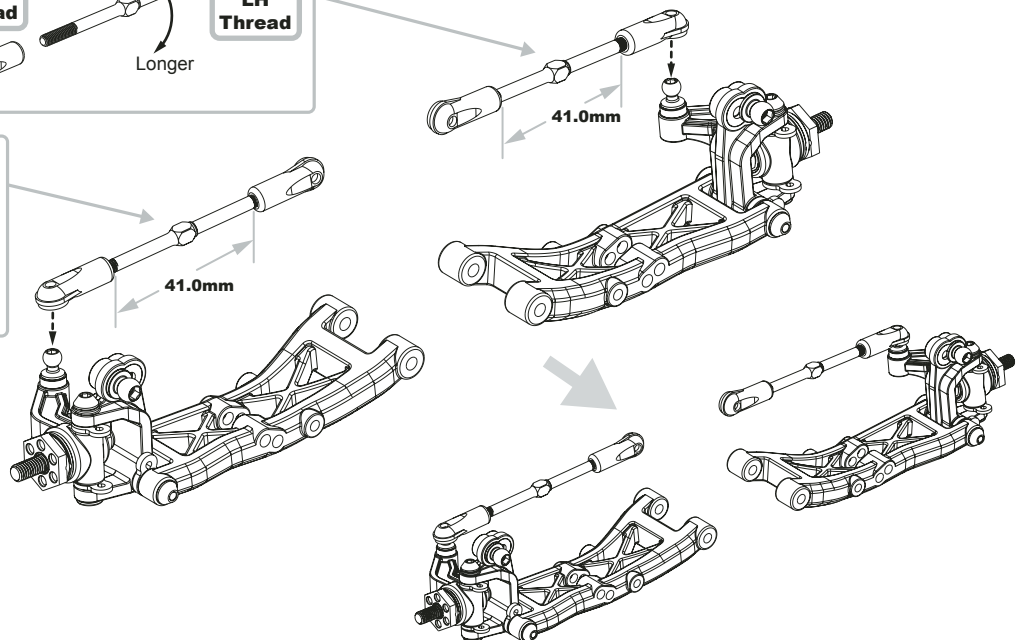


RACE TIP
Check the condition of the bearings periodically. Replace if they feel worn.



BAG B - Step 11

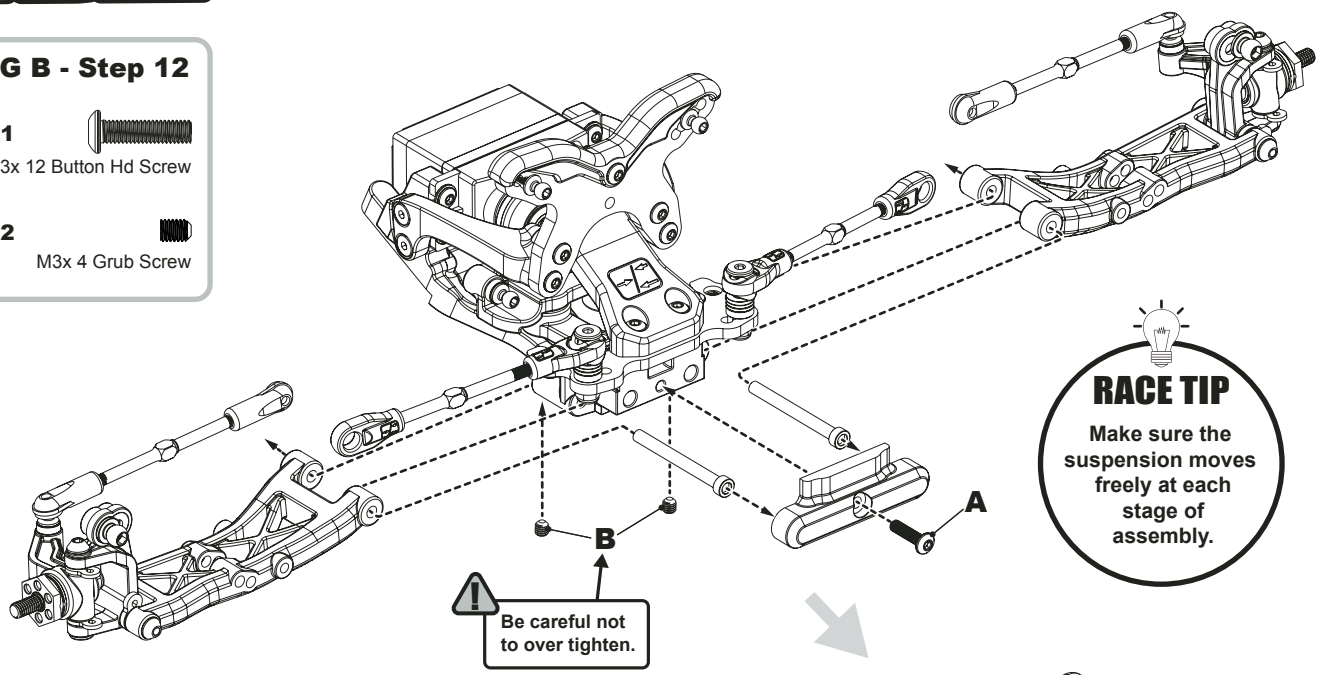


! Note the shape of the turnbuckle. This side of the turnbuckle is the left hand thread.

BAG B - Step 12




- A x1**  M3x 12 Button Hd Screw
- B x2**  M3x 4 Grub Screw



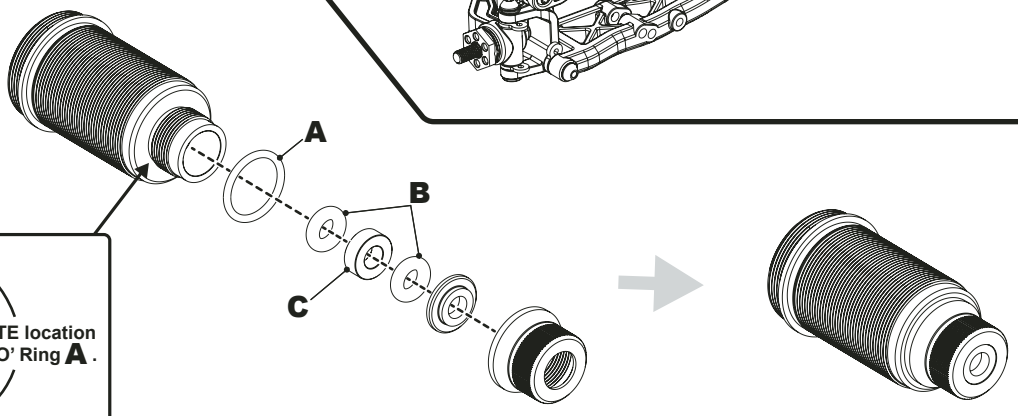
RACE TIP
Make sure the suspension moves freely at each stage of assembly.

! Be careful not to over tighten.

BAG B - Step 13




- A x2**  7.0x 1.0 Black 'O' Ring
- B x4**  Red 'O' Ring
- C x2**  Big Bore Shock Bush

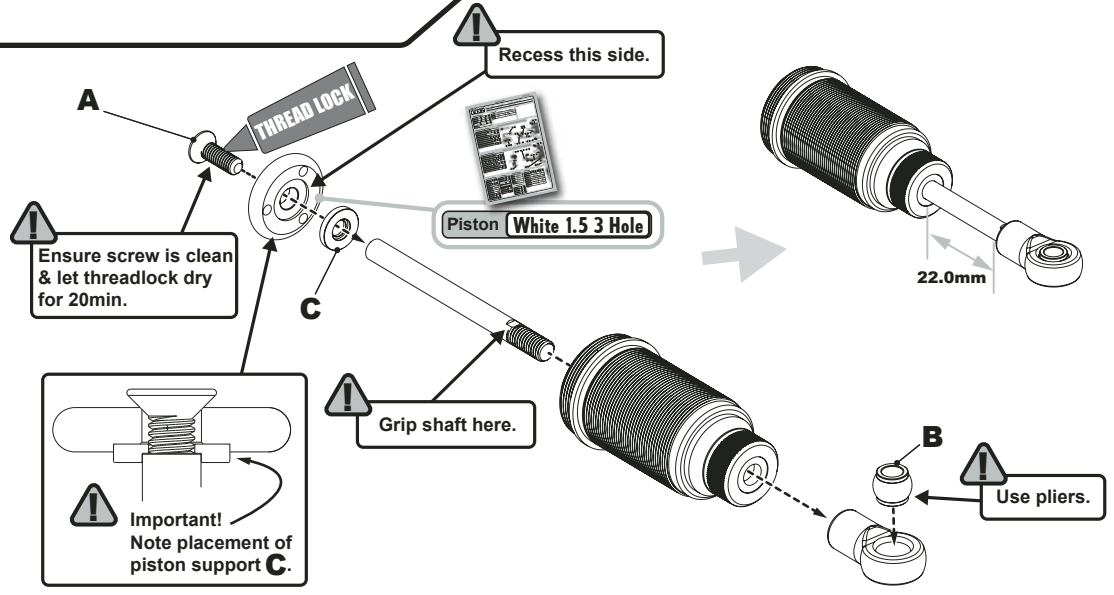
RACE TIP
Grub screw **B** can be used to fine tune the end float of the wishbone.



! NOTE location of 'O' Ring **A**.

BAG B - Step 14

- A x2**  M 2.5x 8mm Csk Screw
- B x2**  Rod End Ball
- C x2**  Shock Piston Support



! Ensure screw is clean & let threadlock dry for 20min.

! Recess this side.

! Important! Note placement of piston support **C**.

! Grip shaft here.

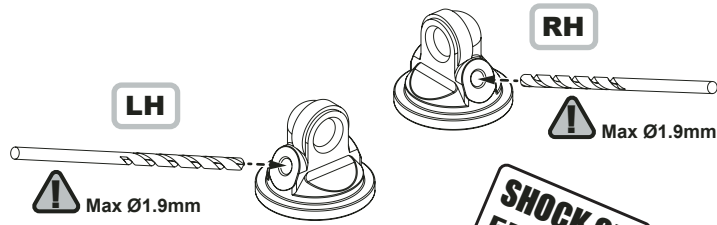
! Use pliers.

BAG B - Step 15

A x2
M2.5x 4 Button Hd Screw

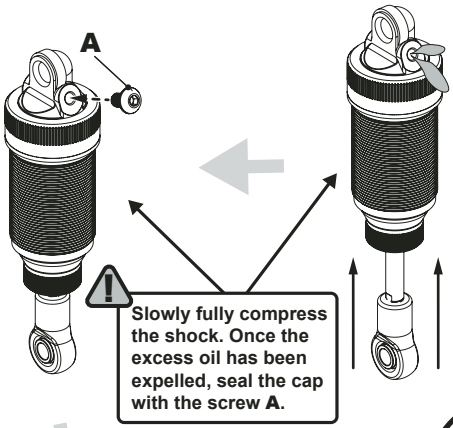
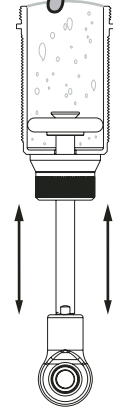
B x2
'O' Ring Ø15 x 1.6

C x2
'O' Ring Ø12 x 1.6

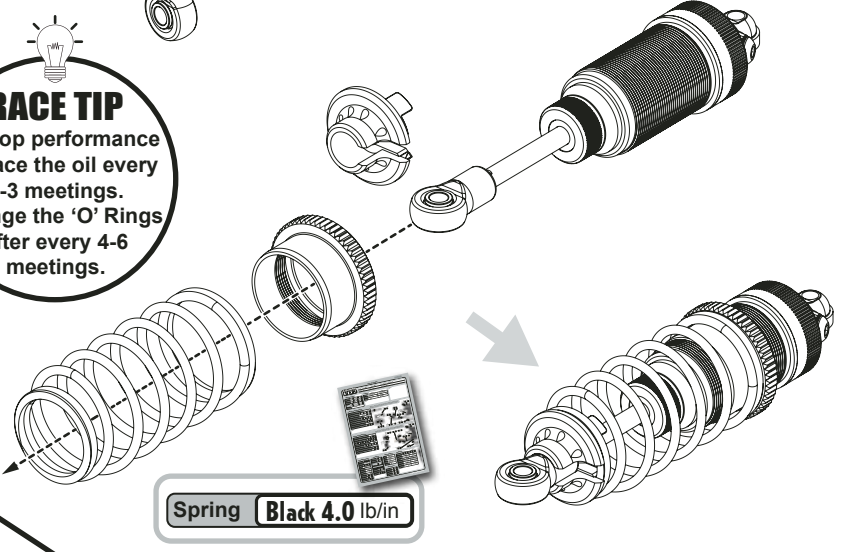
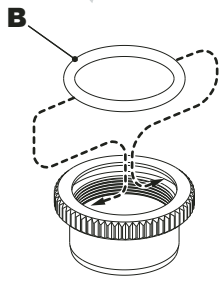


This process results in an aerated damper.

Cap V S A

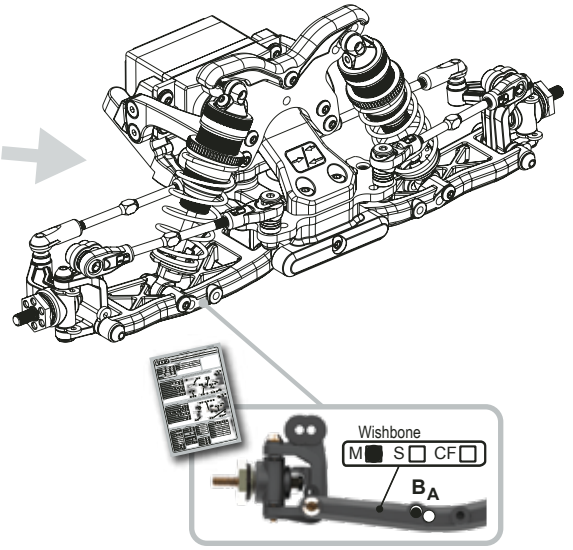
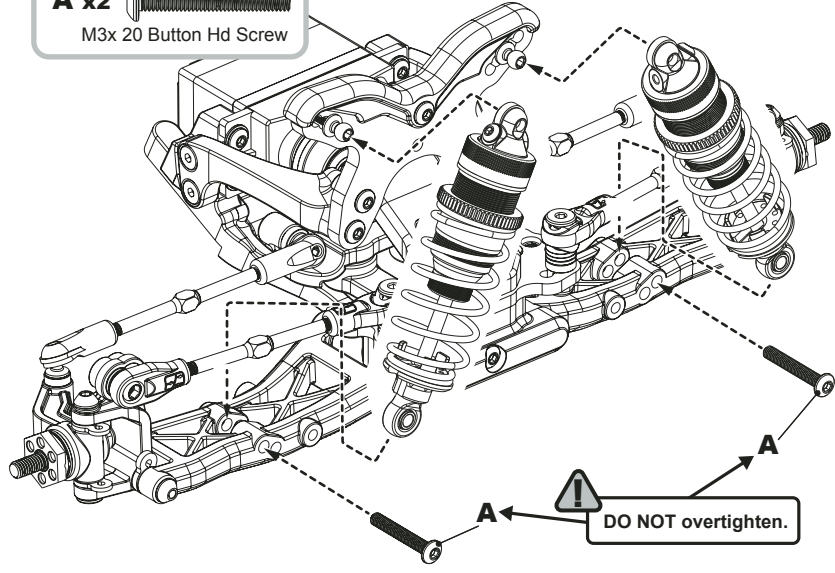


RACE TIP
For top performance replace the oil every 2-3 meetings. Change the 'O' Rings after every 4-6 meetings.



BAG B - Step 16

A x2
M3x 20 Button Hd Screw



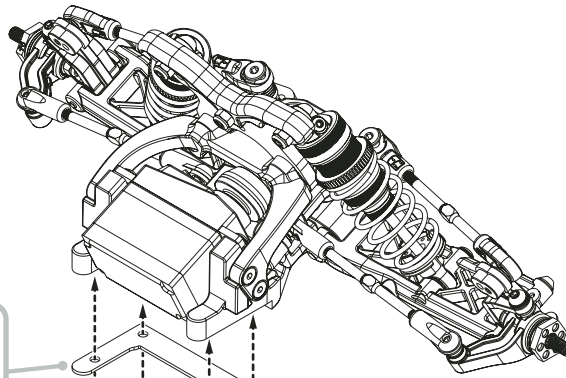
BAG B - Step 17

A x4 
M3x 10 Csk Hd Screw



Assembled as 0mm.

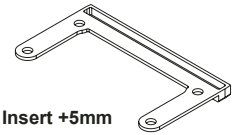
Chassis Insert
0mm +5mm



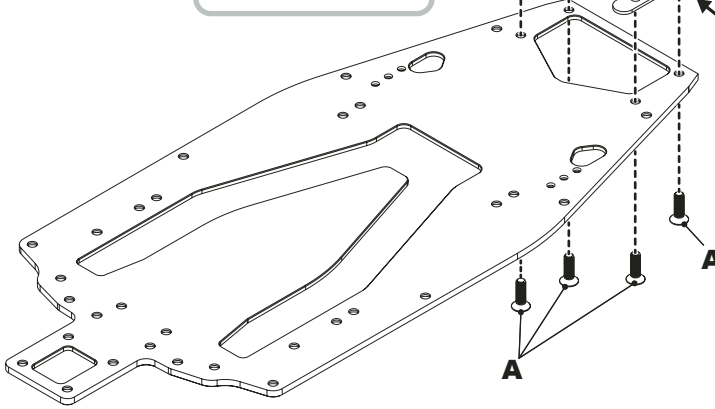
Chassis Insert 0mm



Chassis Insert.
You can increase the length of your chassis by 5mm using the +5mm Chassis Insert. Replace the 0mm Chassis Insert. See page 28 - Front Wheelbase Options & Chassis Insert.



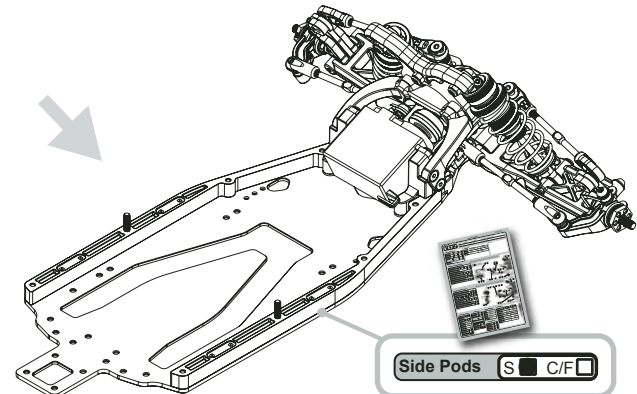
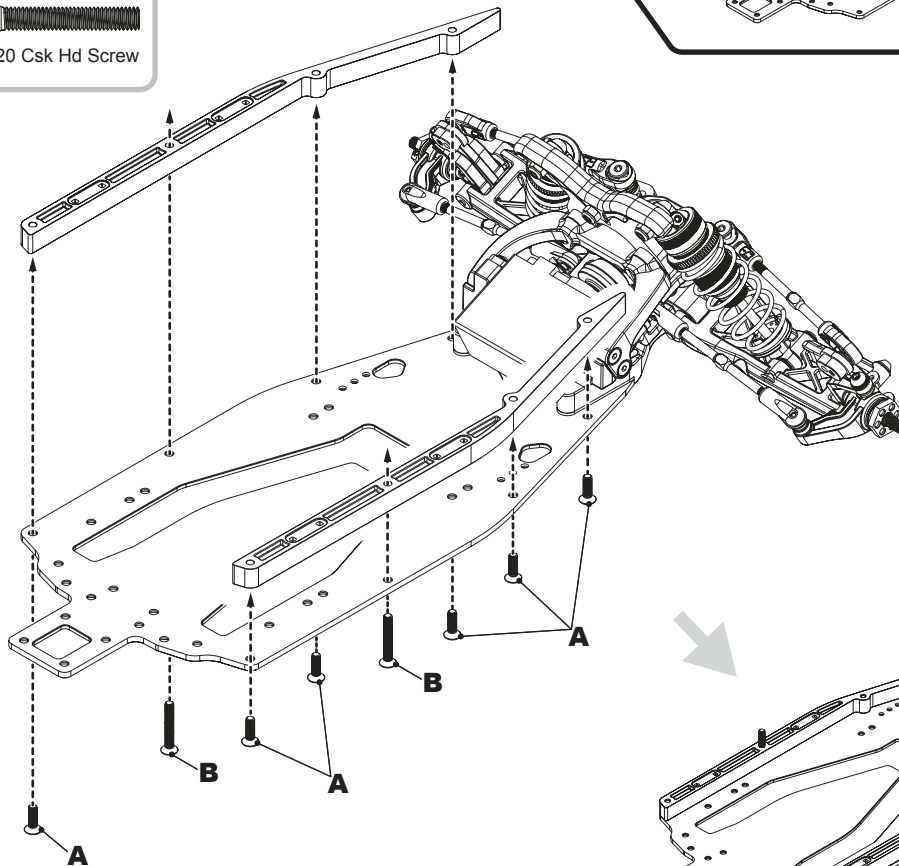
Chassis Insert +5mm



BAG B - Step 18

A x6 
M3x 10 Csk Hd Screw

B x2 
M3x 20 Csk Hd Screw

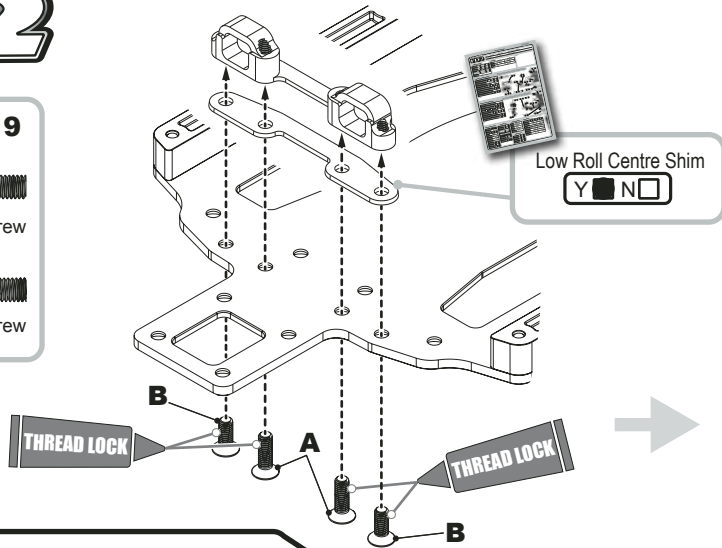


Side Pods S C/F

BAG C - Step 19

A x2
M3x 10 Csk Hd Screw

B x2
M3x 8 Csk Hd Screw

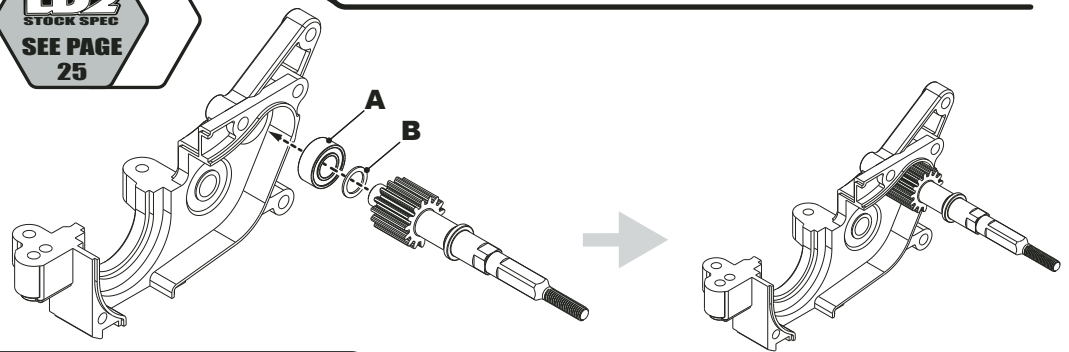


RACE TIP
Check these screws regularly to make sure they are tight. If loose they may damage the track surface.

BAG C - Step 20

A x1
Ø5 x Ø10 x 4mm Bearing

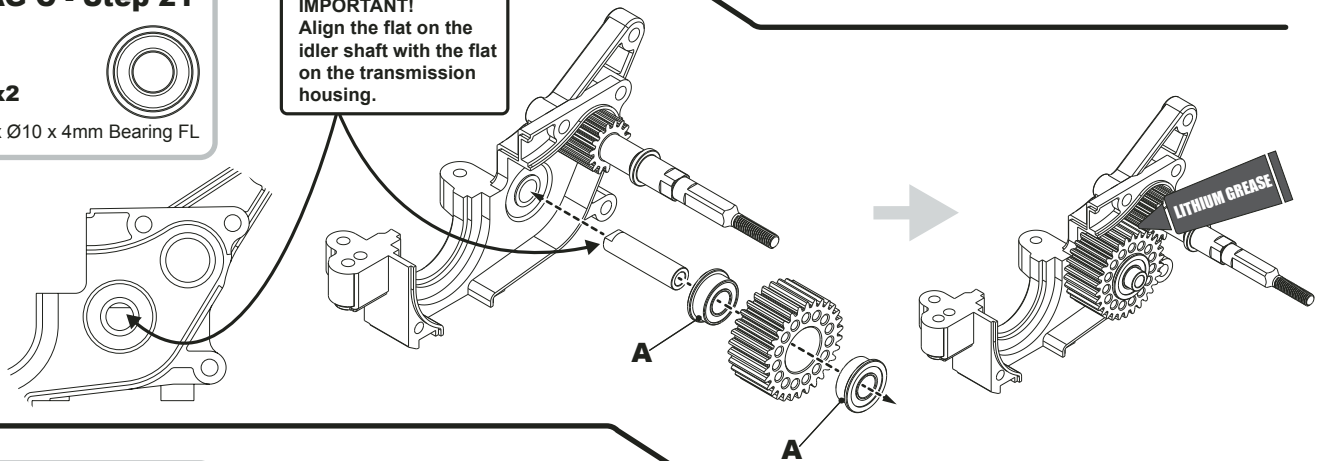
B x1
Ø5 x Ø7mm Shim



BAG C - Step 21

A x2
Ø5 x Ø10 x 4mm Bearing FL

IMPORTANT!
Align the flat on the idler shaft with the flat on the transmission housing.



BAG C - Step 22

A x1
Ø6 x Ø12 x 4mm Bearing

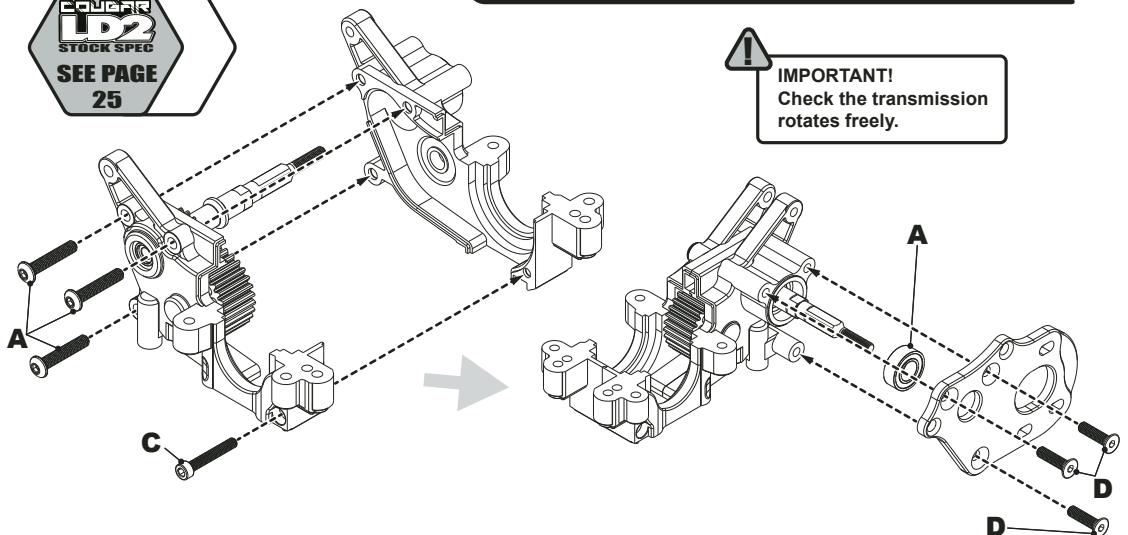
B x3
M3x 16 Button Hd Screw

C x1
M2.5x 16 Cap Hd Screw

D x3
M3x 12 Csk Screw

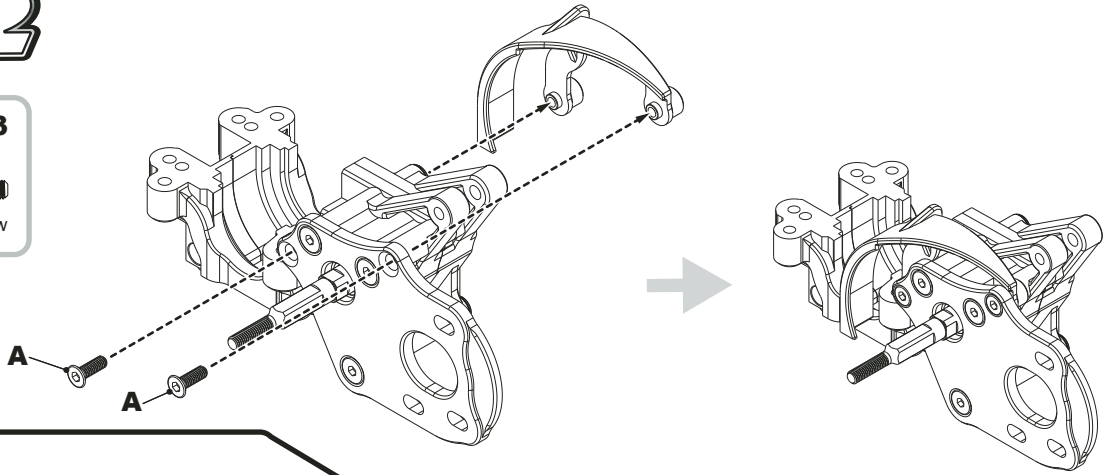


IMPORTANT!
Check the transmission rotates freely.



BAG C - Step 23

A x2
M2.5x 8 Csk Hd Screw

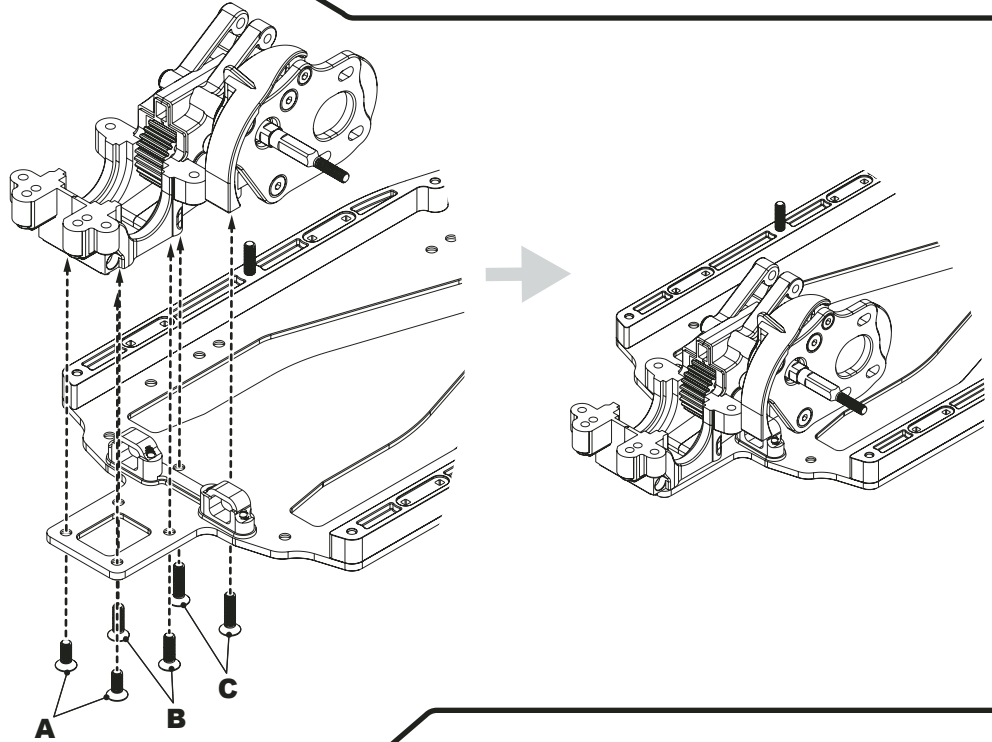


BAG C - Step 24

A x2
M3x 8 Csk Hd Screw

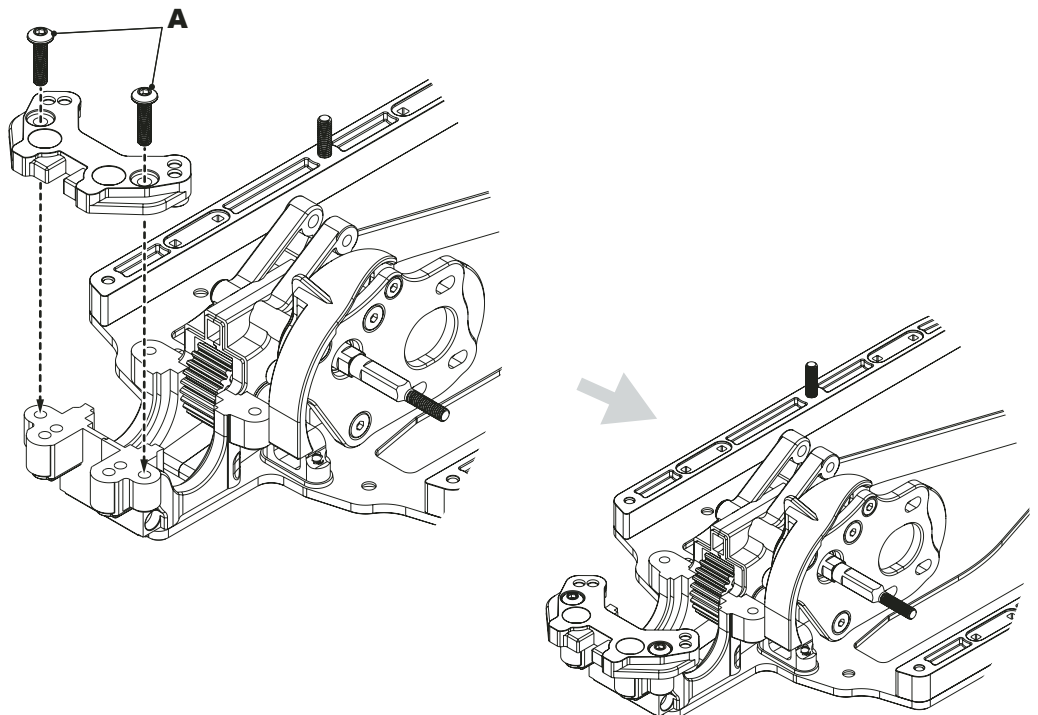
B x2
M3x 10 Csk Hd Screw

C x2
M3x 12 Csk Hd Screw



BAG C - Step 25

A x2
M3x 12 Button Hd Screw





RACE TIP

Use shims **A** and **B** to take up excessive end float. Max 3 x **A** and 2 x **B**. We recommend starting with 1 of each first.

BAG C - Step 26

A x3

Ø5 x Ø7 x 0.1mm Shim

B x2

Ø4 x Ø13 x 0.1mm Shim

C x1

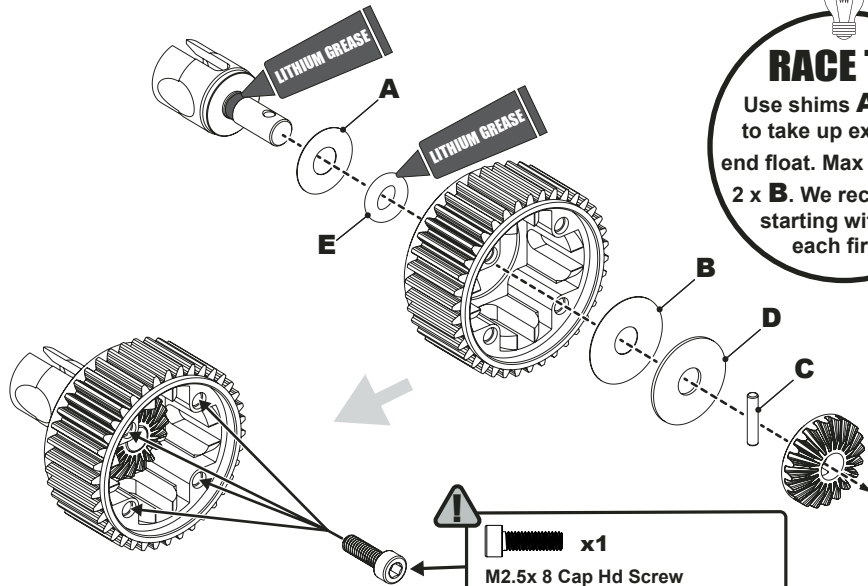
Ø1.5 x 7.8 Pin

D x1

Ø4 x Ø13 x 0.5mm Shim

E x1

'O' Ring Ø3.69 x 1.8



x1

M2.5x 8 Cap Hd Screw

Use to pre-tap the 4 holes in the diff body. Ensure good alignment.

BAG C - Step 27

A x3

Ø5 x Ø7 x 0.1mm Shim

B x2

Ø4 x Ø13 x 0.1mm Shim

C x1

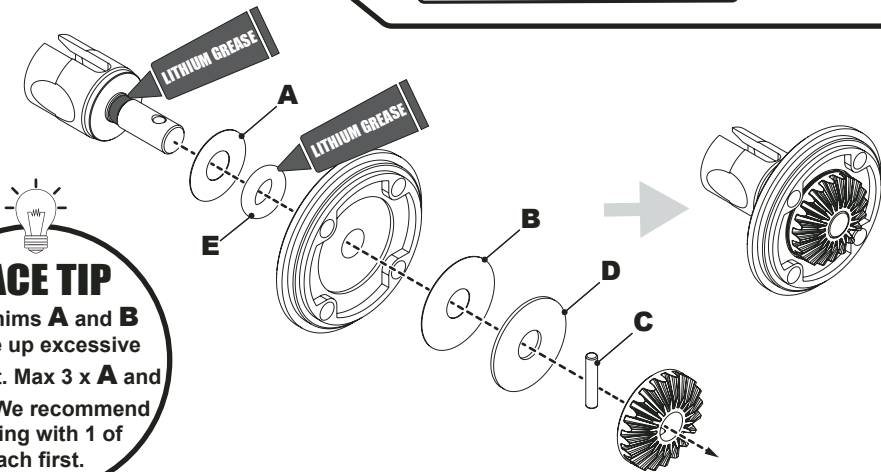
Ø1.5 x 7.8 Pin

D x1

Ø4 x Ø13 x 0.5mm Shim

E x1

'O' Ring Ø3.69 x 1.8



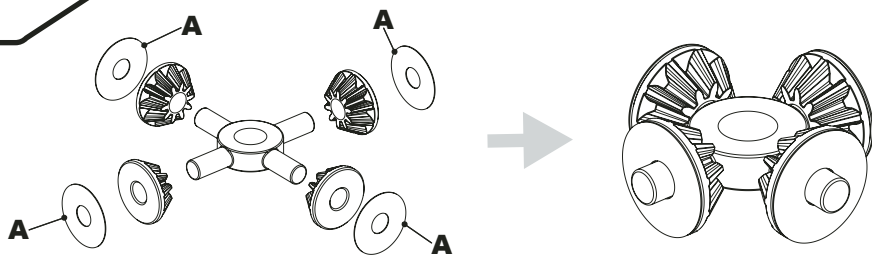
RACE TIP

Use shims **A** and **B** to take up excessive end float. Max 3 x **A** and 2 x **B**. We recommend starting with 1 of each first.

BAG D - Step 28a

A x4

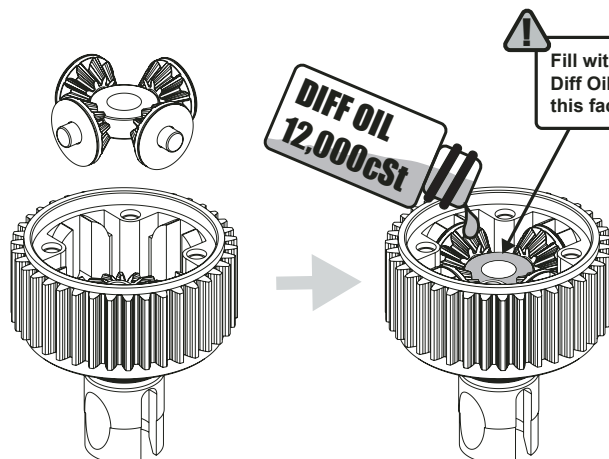
Ø2 x Ø9 x 0.1mm Shim



BAG D - Step 28b

RACE TIP

Put a little oil in the diff housing before you place the gears in. Always make sure all the bubbles in the oil come out.



Fill with 12,000 cSt Diff Oil to just cover this face.

DIFF OIL
12,000cSt

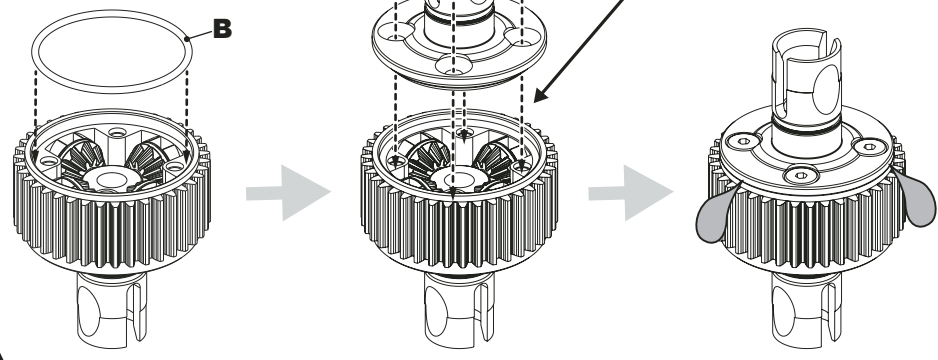
BAG D - Step 28c

A x4
M2.5x 10 Csk Hd Screw

B x1
'O' Ring Ø21 x 1.0

RACE TIP
Make sure all the gears are properly meshed before tightening.

! If the gear mesh feels too loose, return to step 26/27 and an extra shim between the housing and bevel gear.
! Remove any oil that spills onto the diff gear teeth.



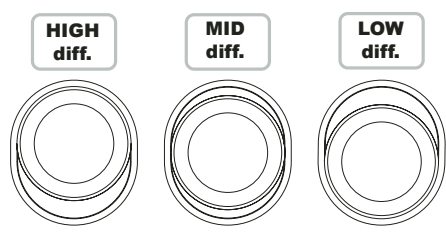
BAG D - Step 29

A x2
Ø10 x Ø15 x 4mm Bearing

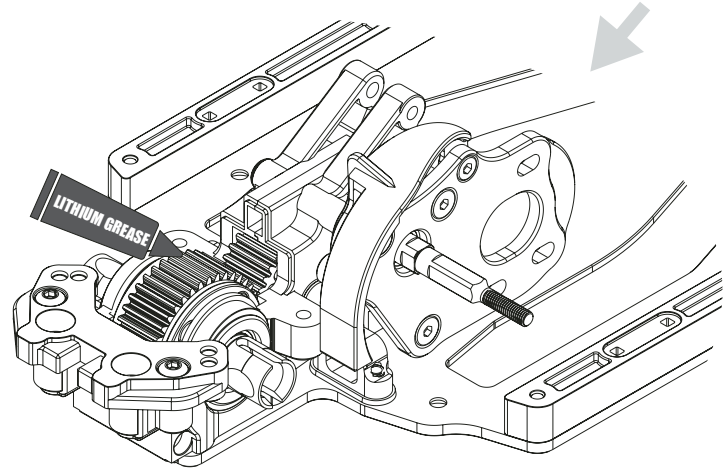
B x6
Ø10 x Ø12 x 0.2mm Shim

! Ensure you use a matching pair of eccentrics. The kit contains both HIGH/LOW and MID eccentrics. Base setting is MID at this stage.

! Start with 2 shims either side, and then add or remove to achieve a small amount of end float.








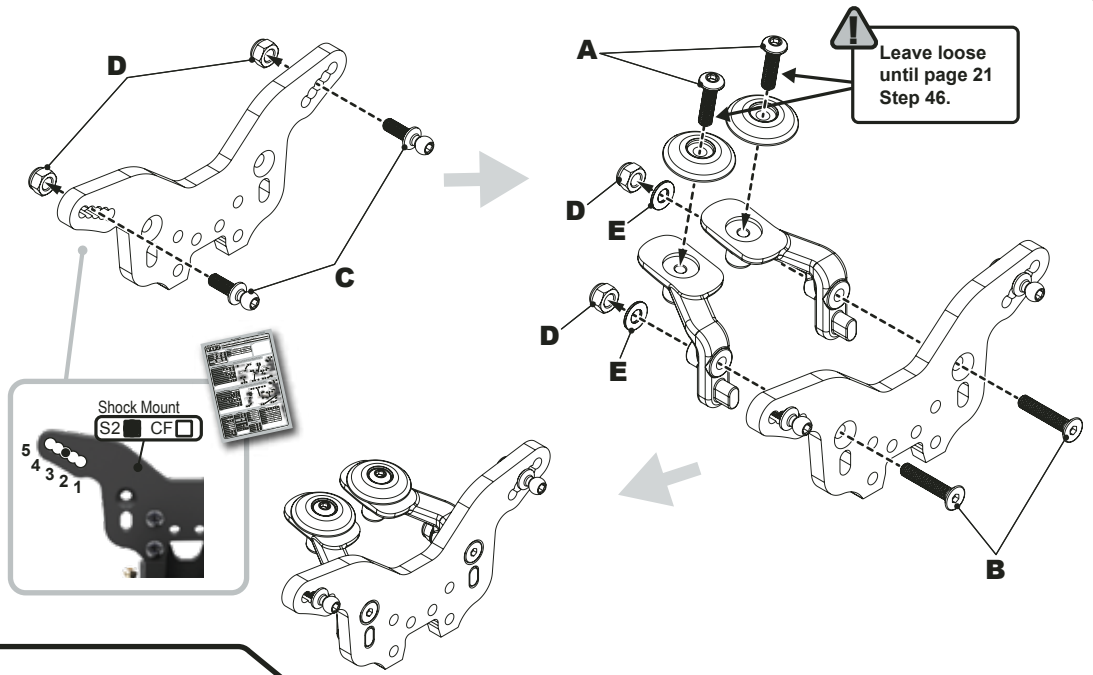
! Ensure you use a matching pair of eccentrics. The kit contains both HIGH/LOW and MID eccentrics. Base setting is MID at this stage.



RACE TIP
Periodically check the gears for signs of damage or wear. Do not run them dry. Reapply grease every 10-12 runs.

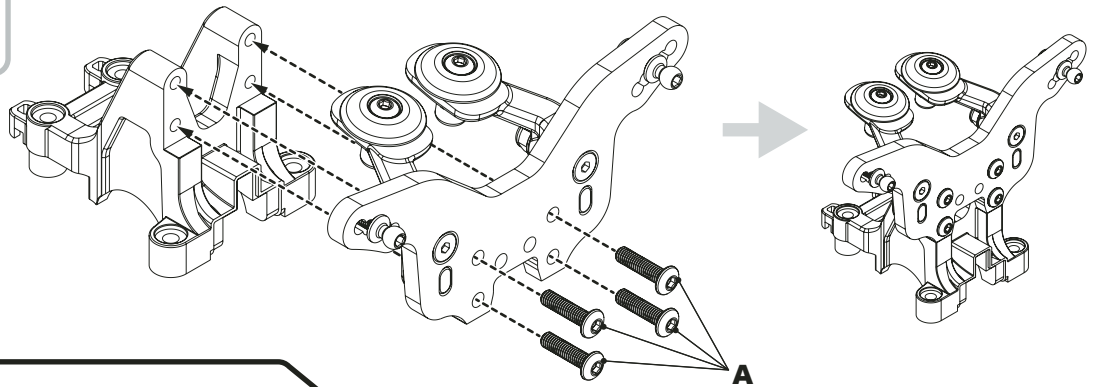
BAG D - Step 30

- A x2**  M3x 12 Button Hd Screw
- B x2**  M3x 16 Csk Hd Screw
- C x2**  Long Ball Stud
- D x4**  M3 Nyloc Nut
- E x2**  M3 Washer





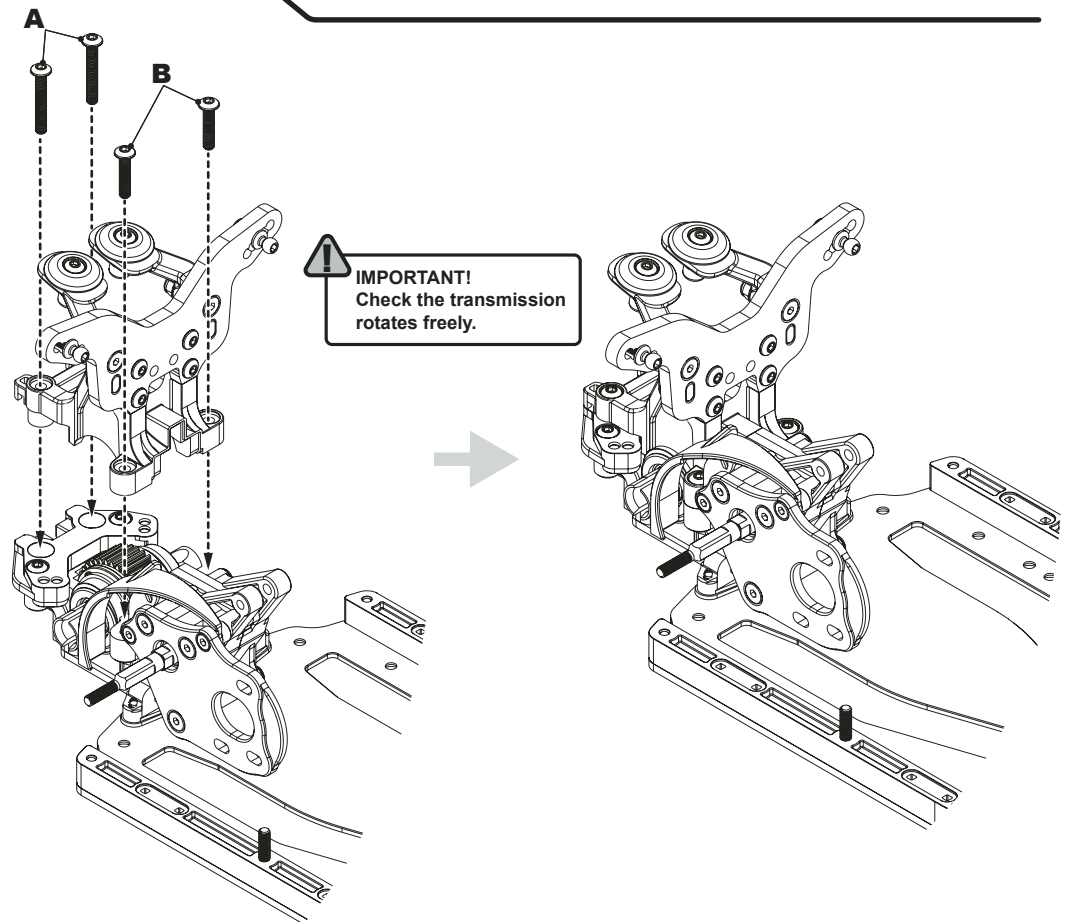
BAG D - Step 31

- A x4**  M3x 12 Button Hd Screw



BAG D - Step 32

- A x2**  M3x 20 Button Hd Screw
- B x2**  M3x 14 Button Hd Screw

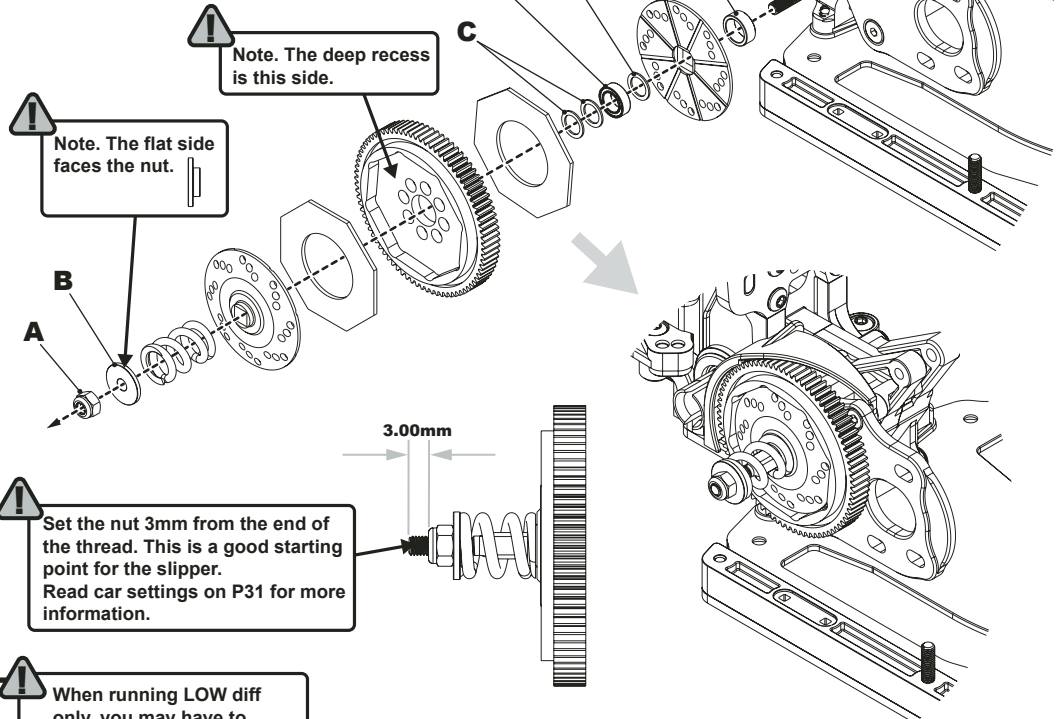


REAR BULKHEAD

COLLEGE LD2 STOCK SPEC
SEE PAGE 25

BAG D - Step 33

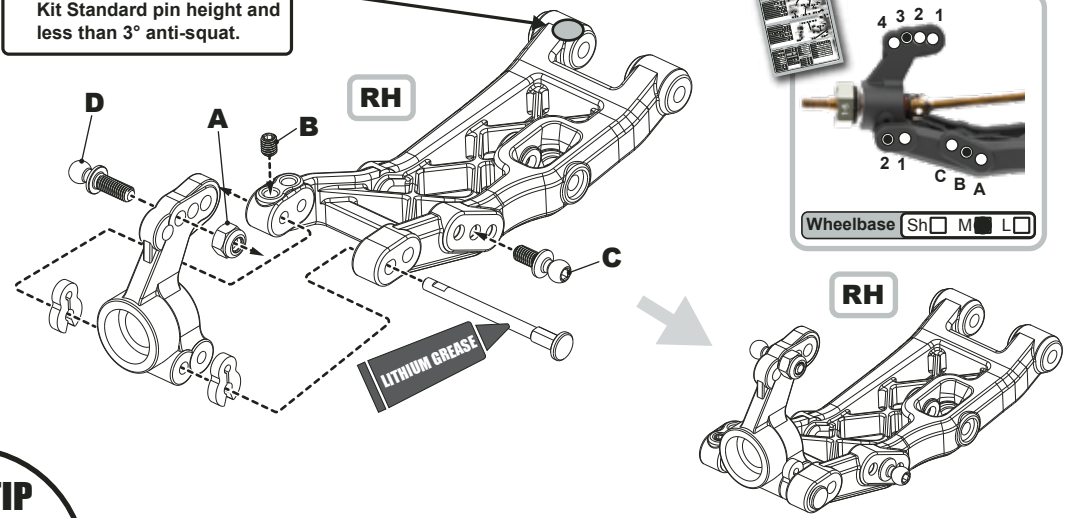
- A x1** M3 Nyloc Nut
- B x1** Slipper Spring Bush
- C x3** Ø5 x Ø7 x 0.40mm Shim
- D x1** Ø5 x Ø8 x 2.5mm Bearing
- E x1** Slipper Spacer



! When running LOW diff only, you may have to remove a small amount of material for driveshaft pin clearance, when using Kit Standard pin height and less than 3° anti-squat.

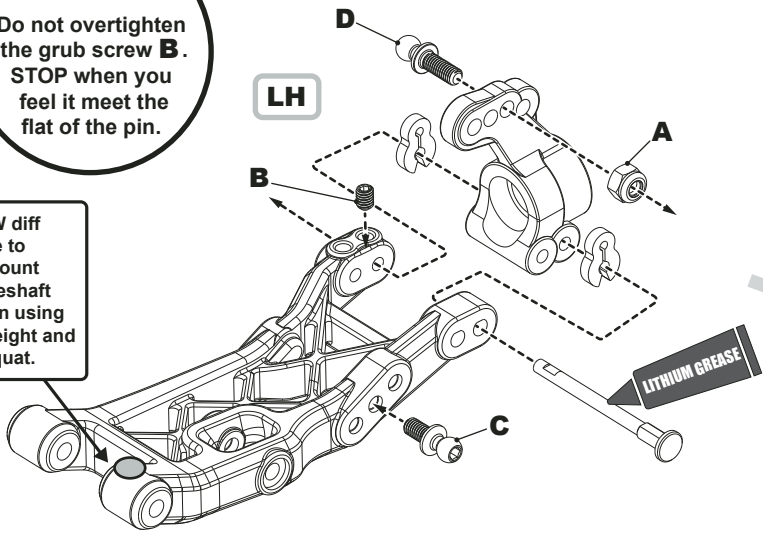
BAG D - Step 34

- A x2** M3 Nyloc Nut
- B x2** M3x 4 Grub Screw
- C x2** Pro Ball Stud Short
- D x2** Pro Ball Stud Long

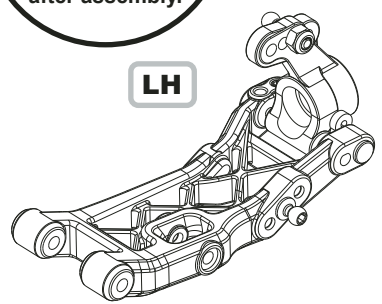


RACE TIP
Do not overtighten the grub screw **B**. STOP when you feel it meet the flat of the pin.

! When running LOW diff only, you may have to remove a small amount of material for driveshaft pin clearance, when using Kit Standard pin height and less than 3° anti-squat.

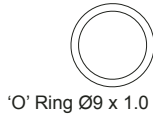


RACE TIP
Use a little Lithium grease on the pin. Make sure the hub moves freely after assembly.

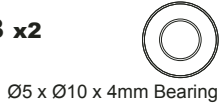


BAG D - Step 35

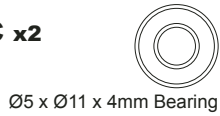
A x2



B x2



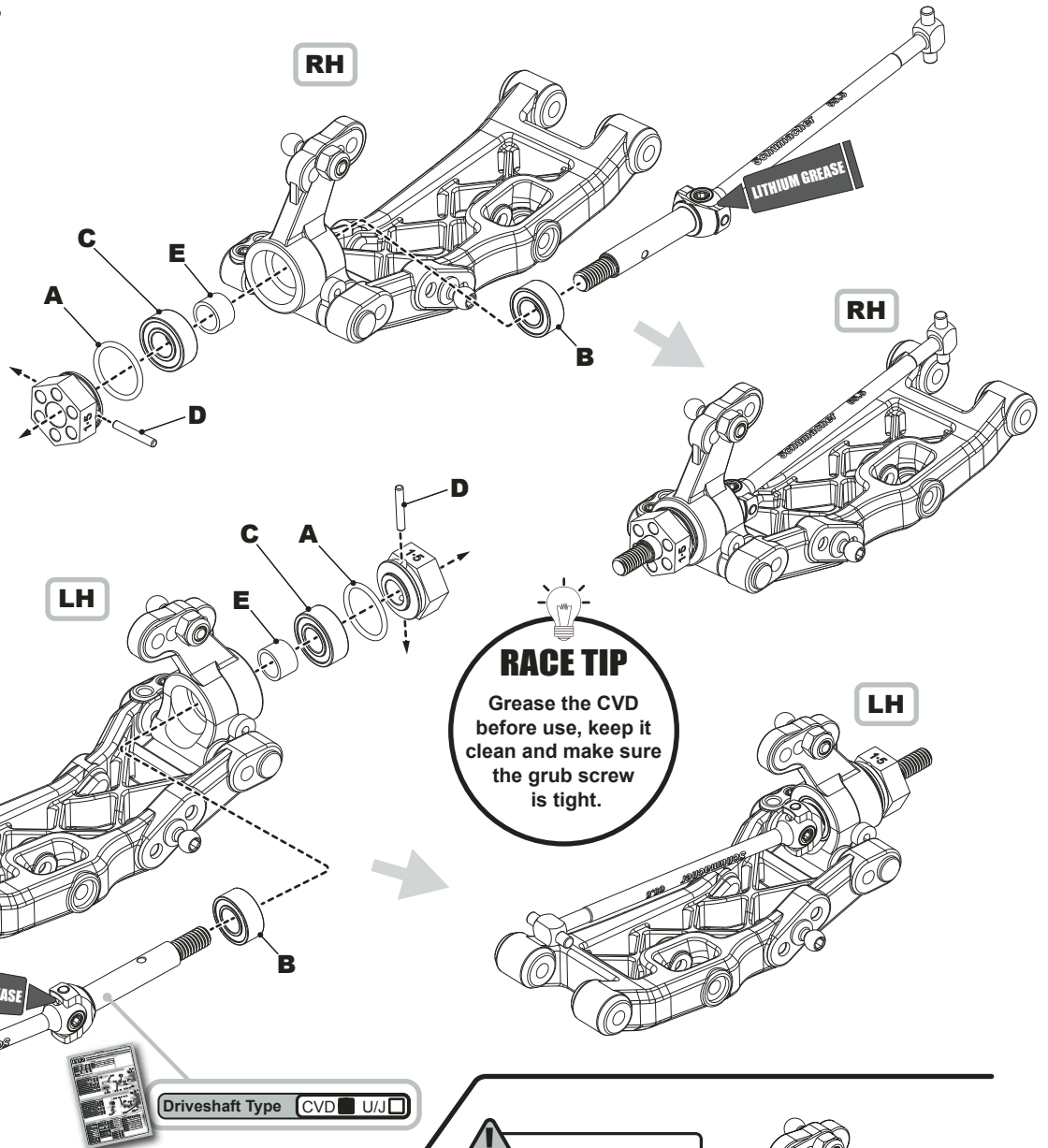
C x2



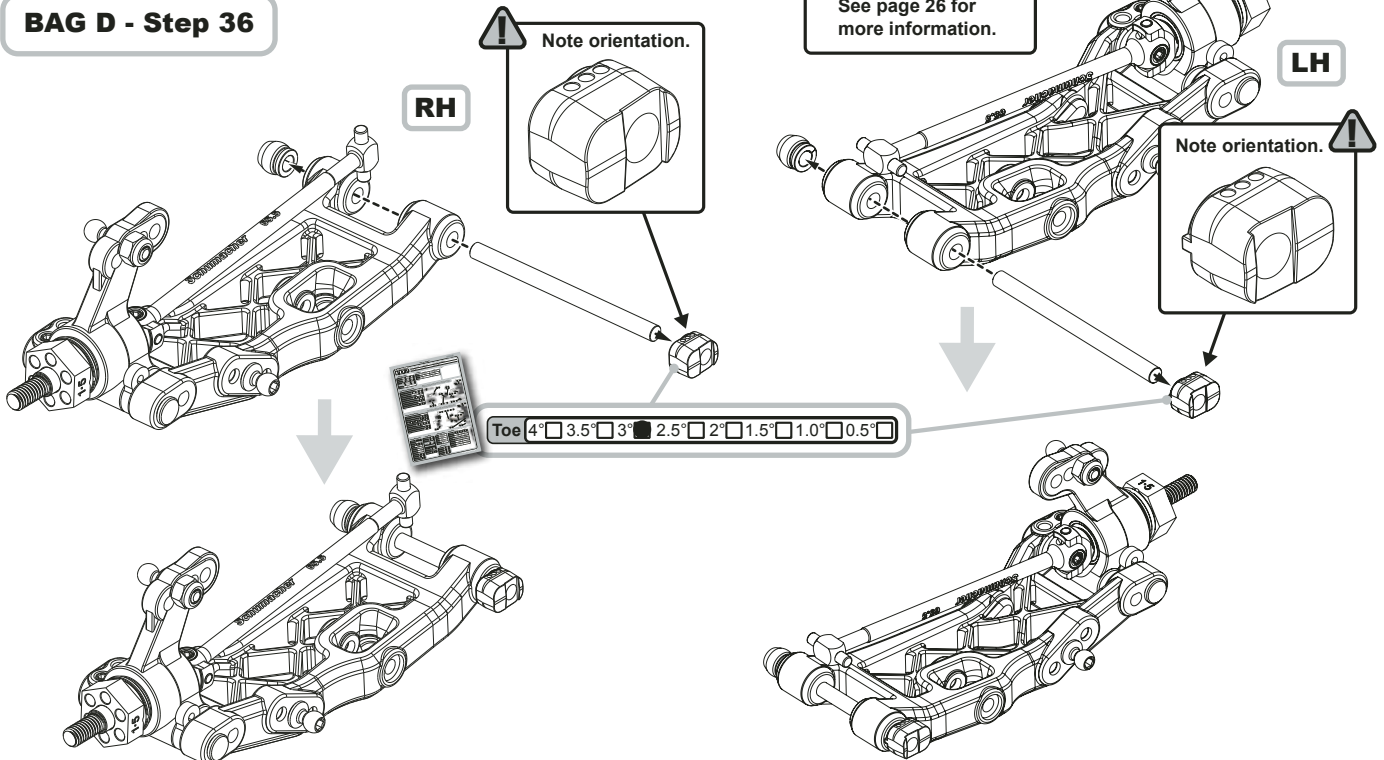
D x2



E x2



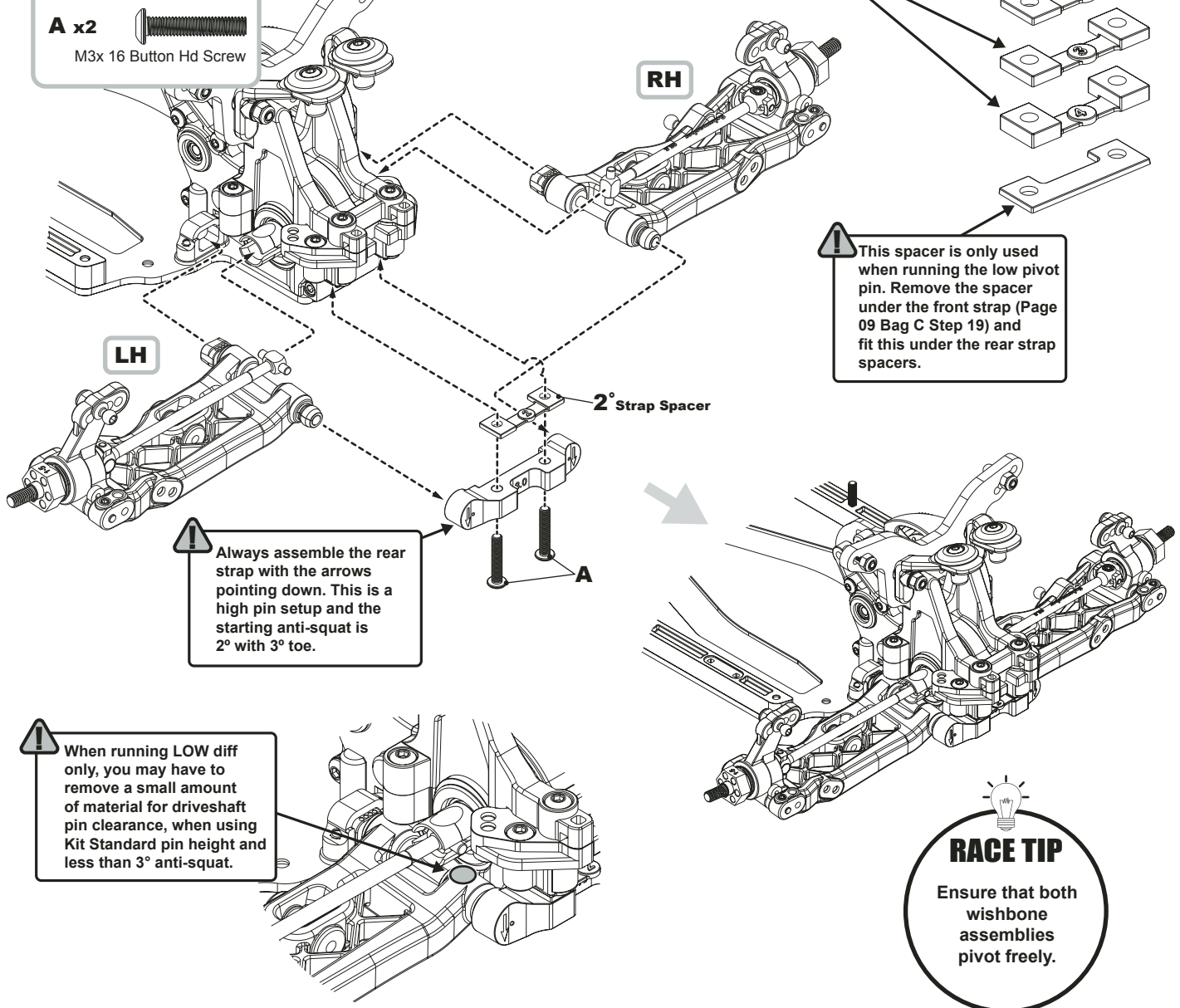
BAG D - Step 36



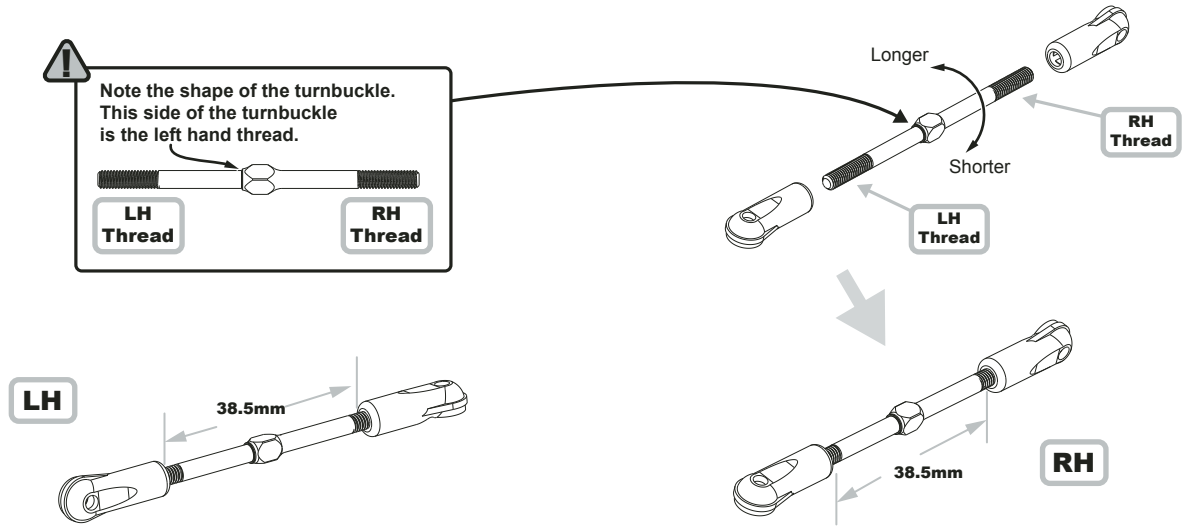
REAR SUSPENSION

BAG E - Step 37

A x2
M3x 16 Button Hd Screw





BAG E - Step 38a

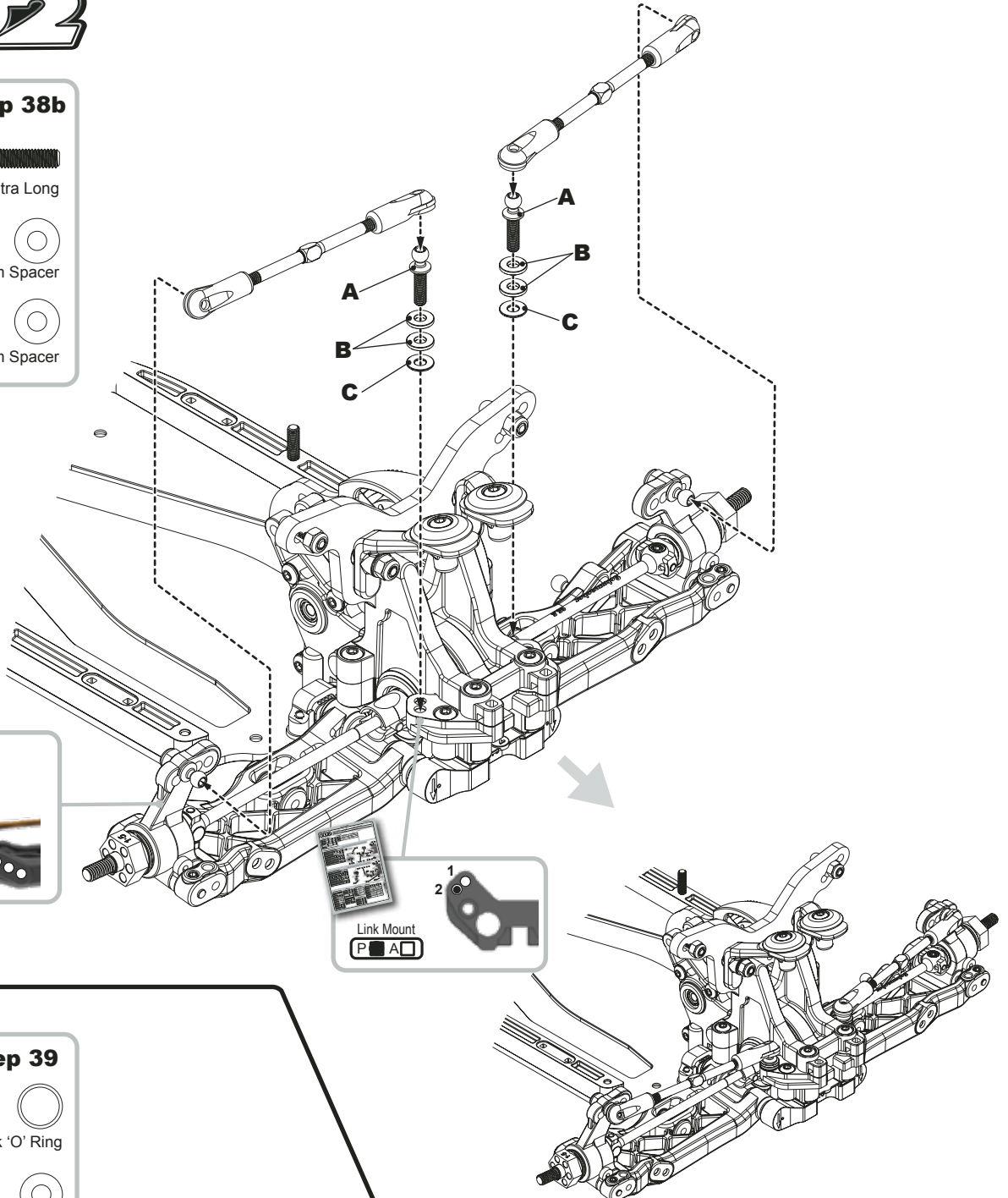
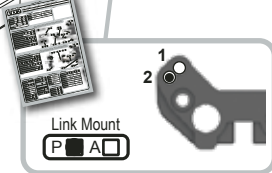
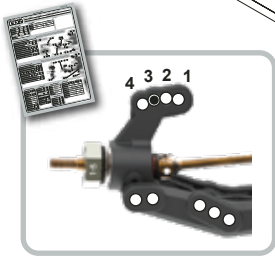


BAG E - Step 38b

A x2 
Ball Stud Ultra Long


B x4 
1mm Spacer


C x2 
0.5mm Spacer

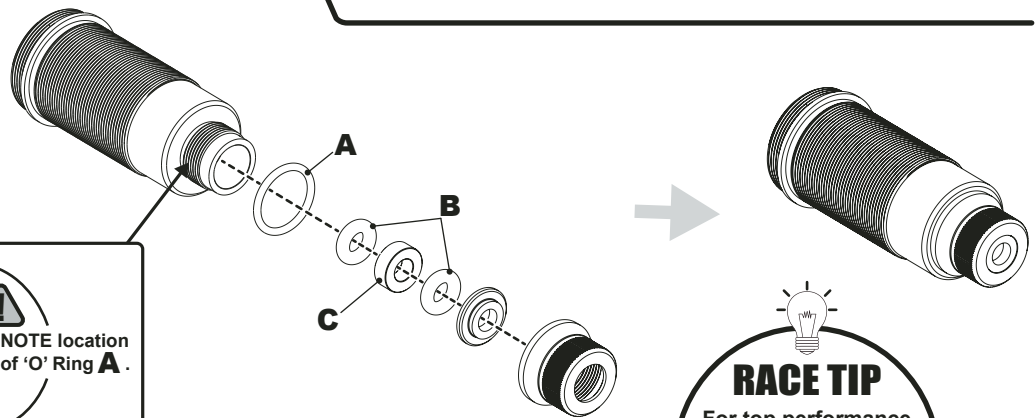
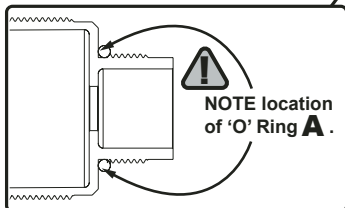


BAG E - Step 39

A x2 
7.0x 1.0 Black 'O' Ring

B x4 
Red 'O' Ring

C x2 
Big Bore Shock Bush



RACE TIP

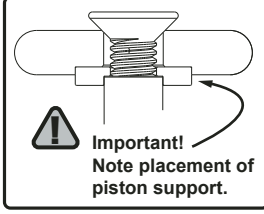
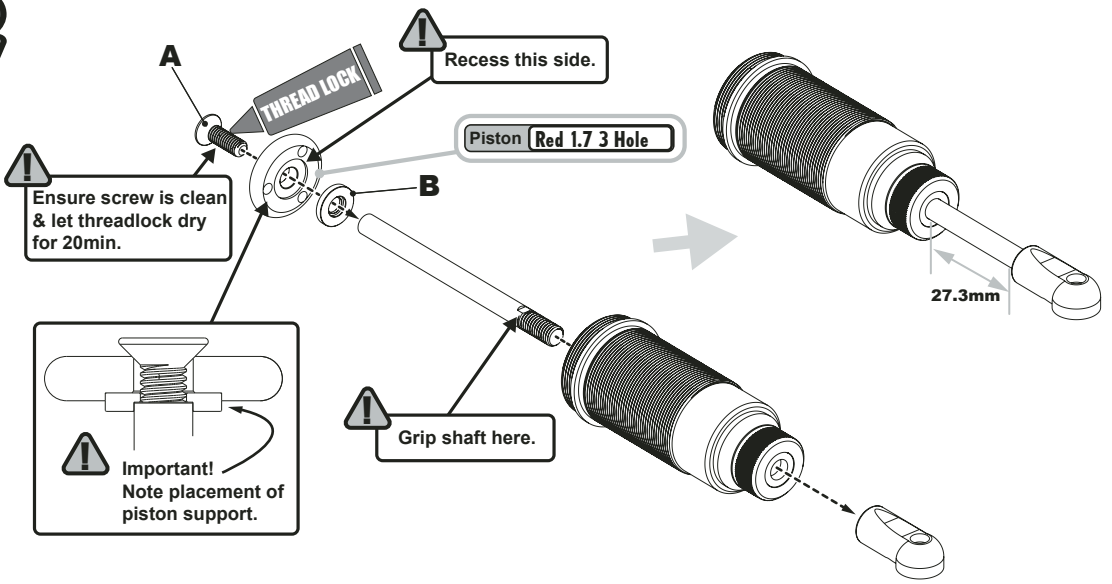
For top performance replace the oil every 2-3 meetings. Change the 'O' Rings after every 4-6 meetings.

REAR SUSPENSION SHOCKS

BAG E - Step 40

A x2
2.5x 8mm Csk Screw

B x2
Shock Piston Support

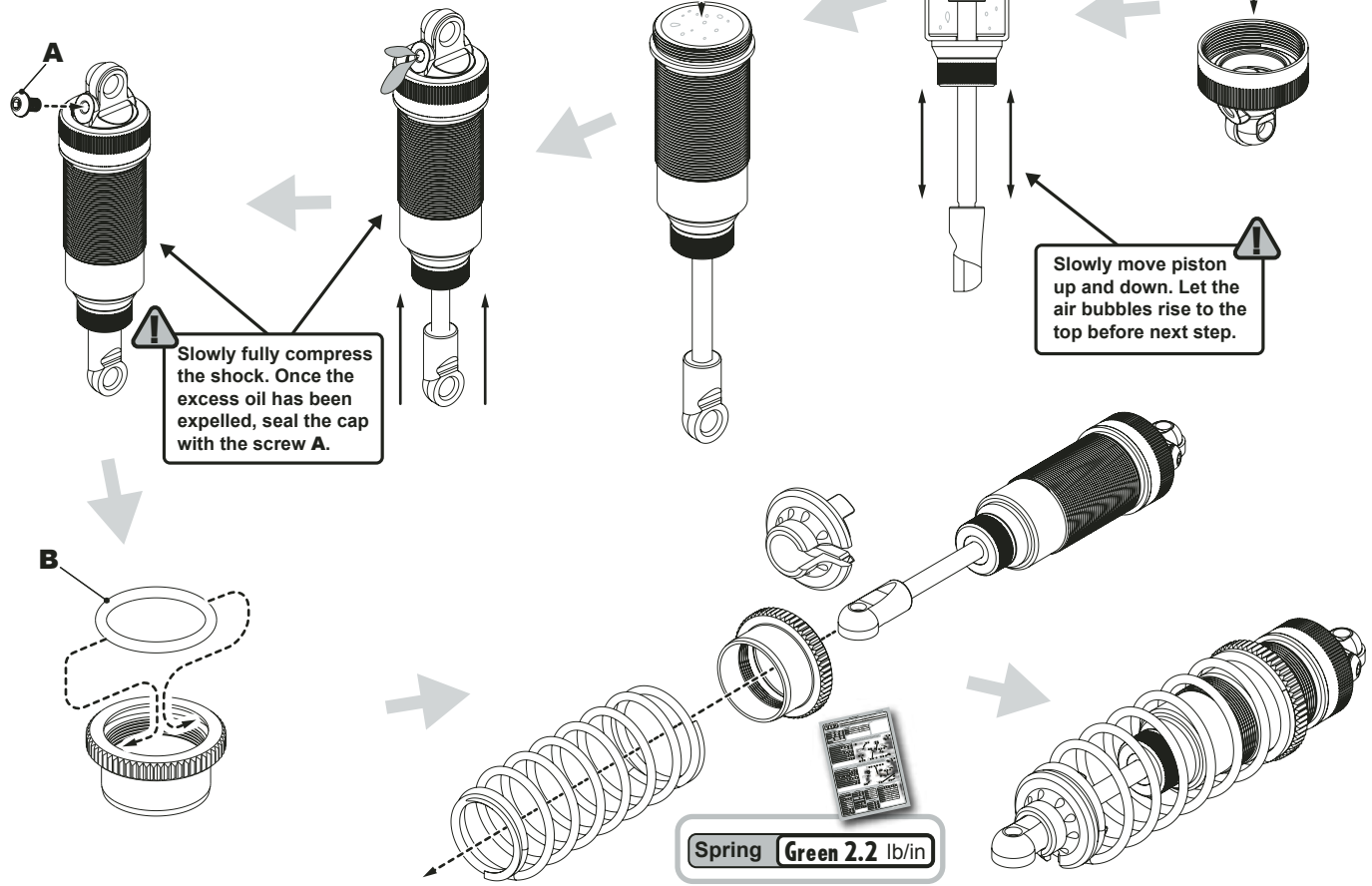
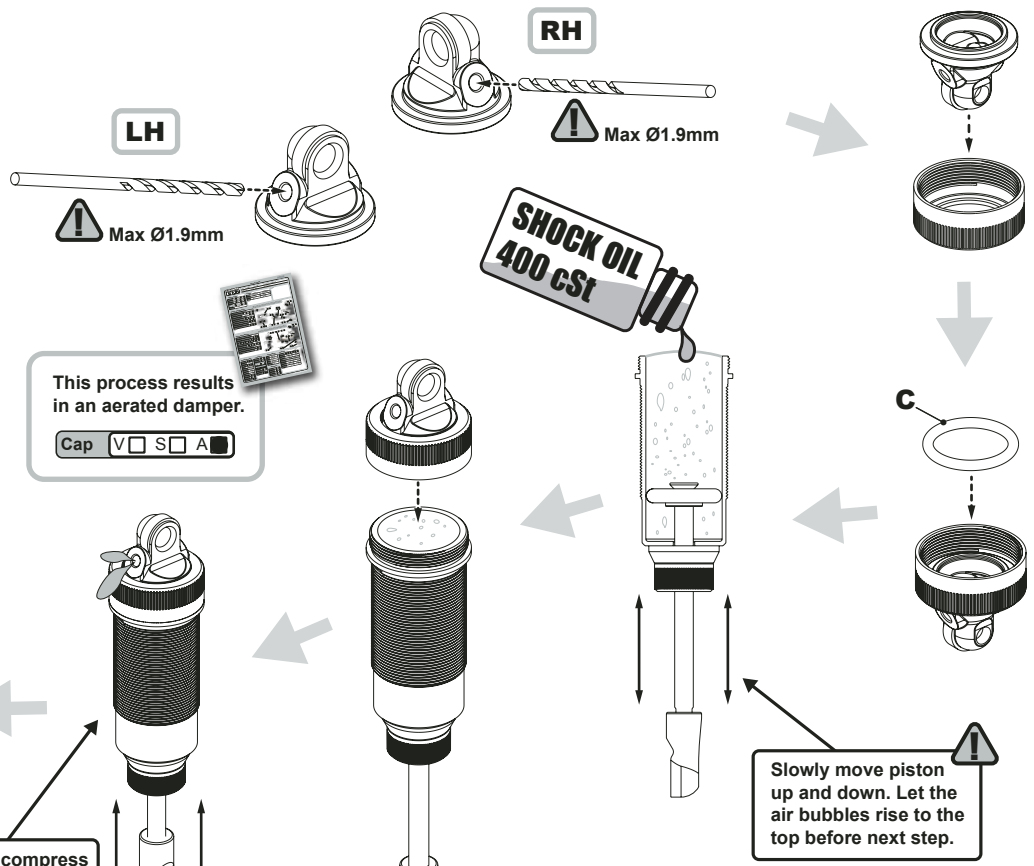


BAG E - Step 41a

A x2
M2.5x 4 Button Hd Screw

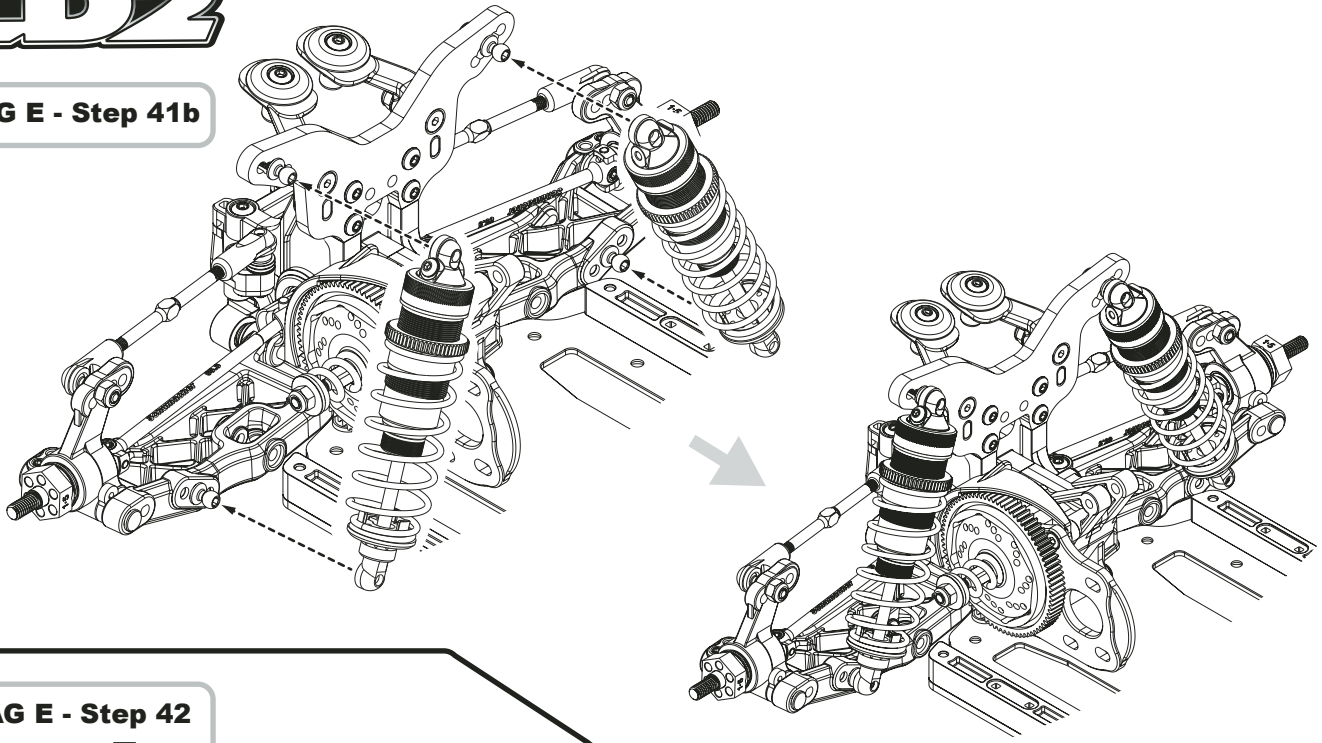
B x2
'O' Ring Ø15 x 1.6

C x2
'O' Ring Ø12 x 1.6





REAR SHOCKS

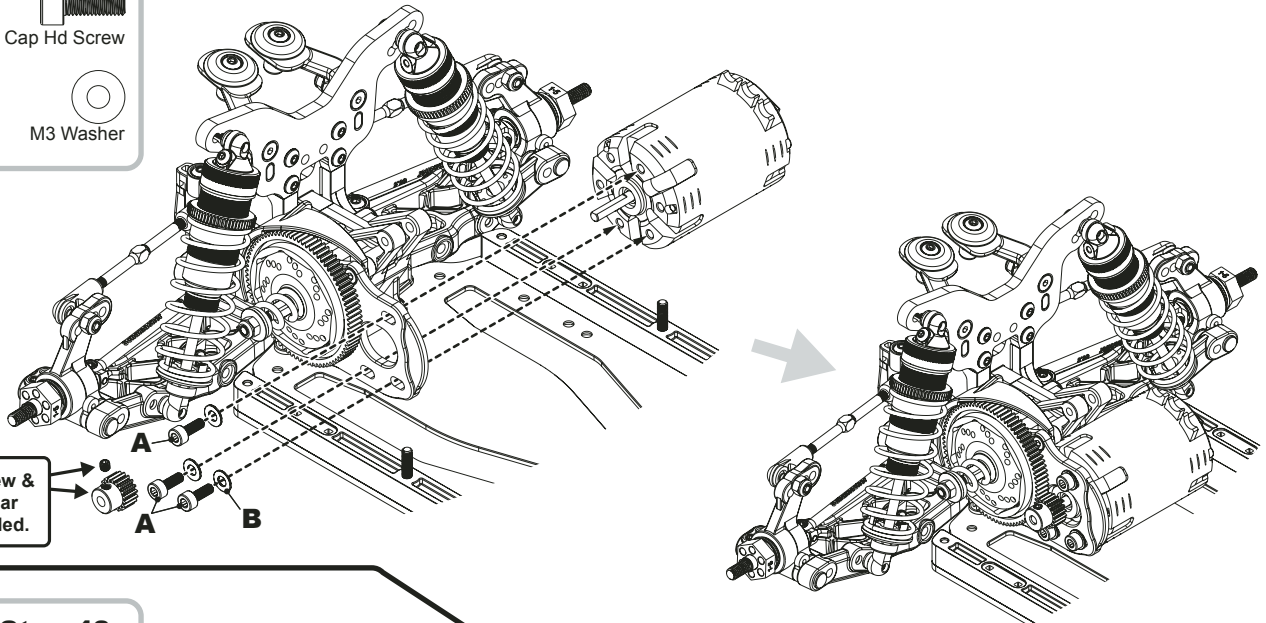
BAG E - Step 41b




BAG E - Step 42


A x3  M3x 8 Cap Hd Screw

B x3  M3 Washer



 Grub screw & Pinion Gear not included.

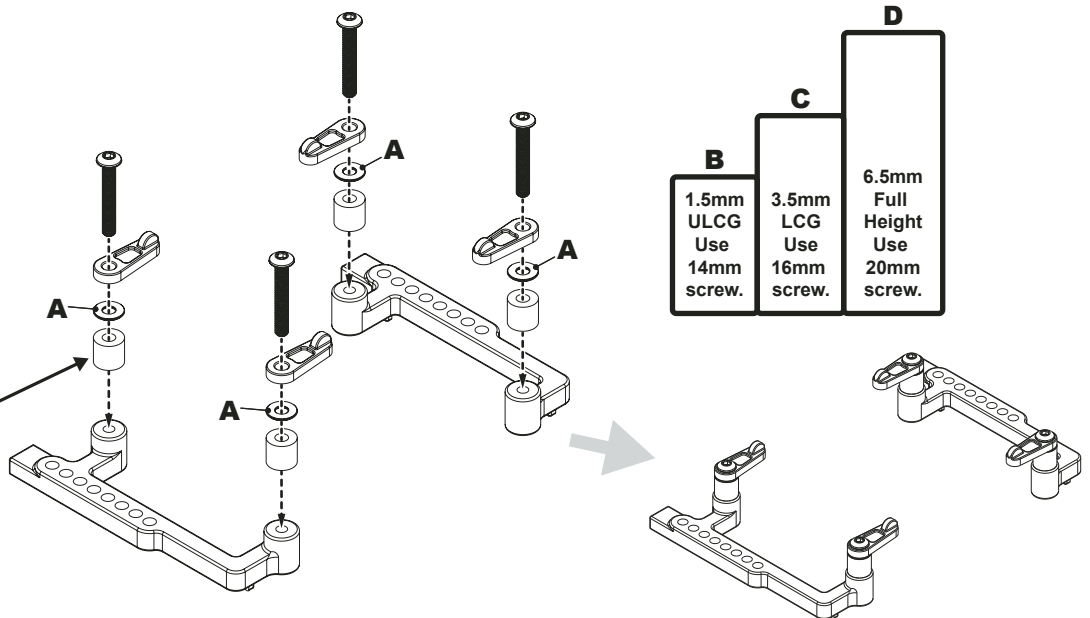
BAG E - Step 43a


A x4  0.5mm Spacer

B x4  M3x 14 Button Hd Screw

C x4  M3x 16 Button Hd Screw

D x4  M3x 20 Button Hd Screw

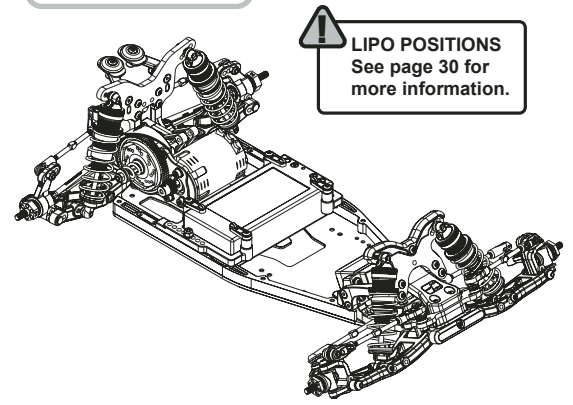
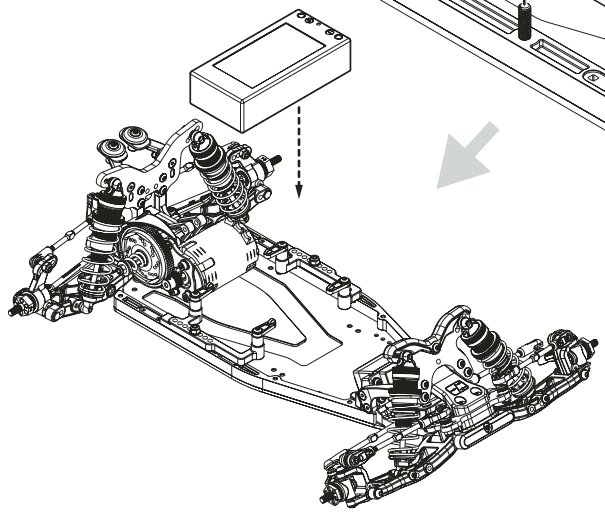
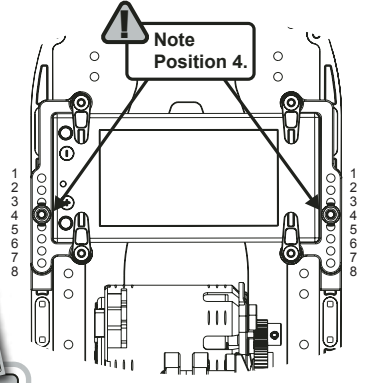
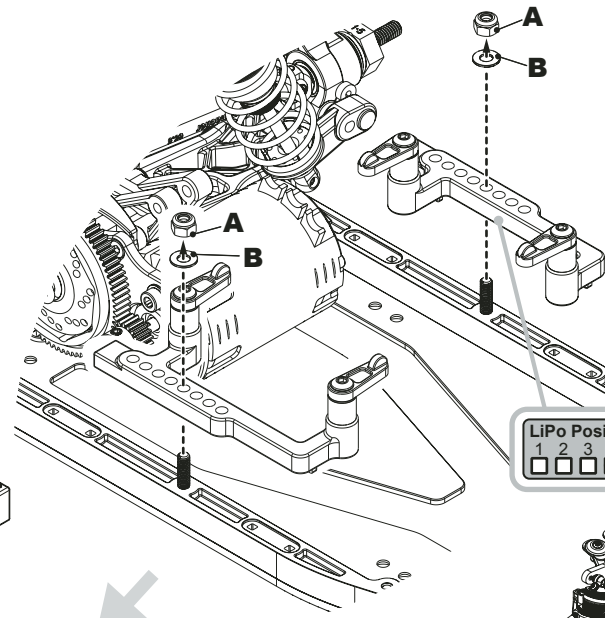


 Three LiPo spacers are included in the kit. To be used with different height lipos.

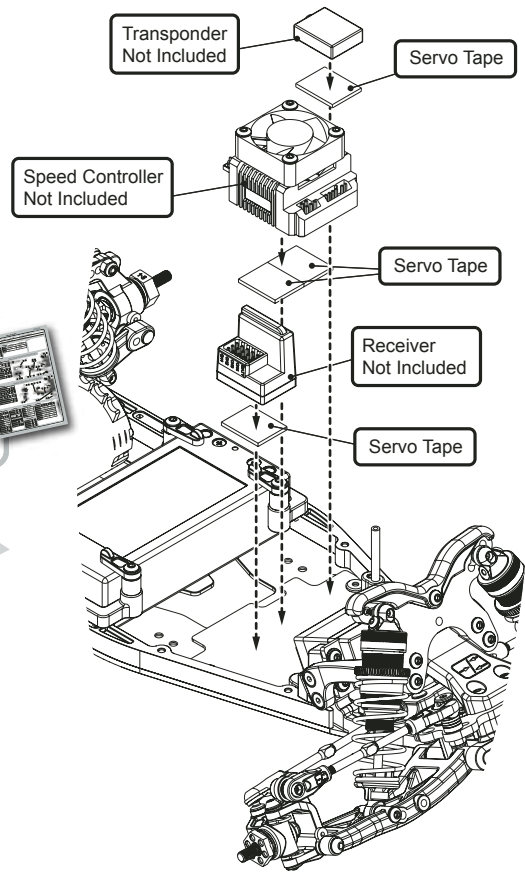
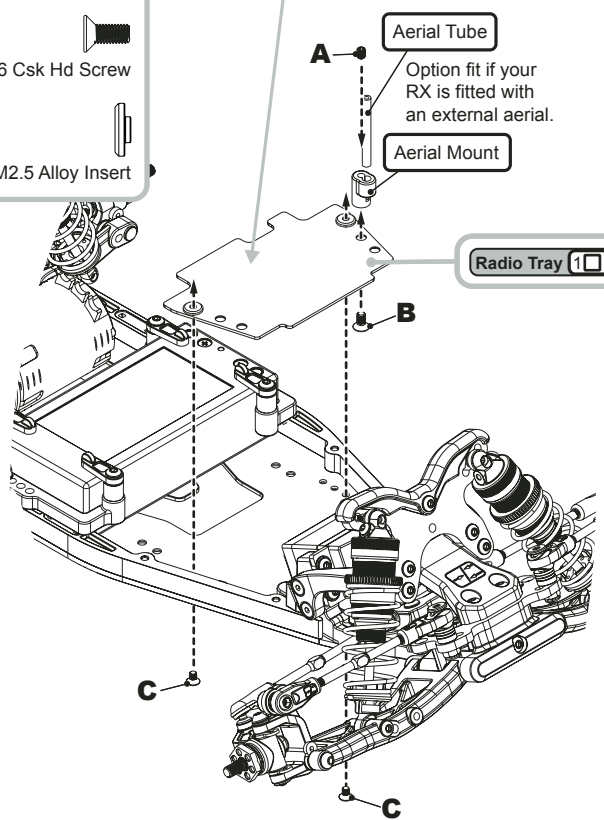
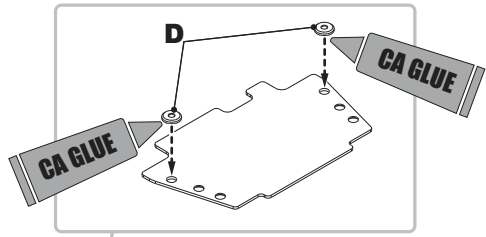
- ULCG LiPo's use the 1.5mm spacer.
- LCG LiPo's use the 3.5mm spacer.
- Full height LiPo's use the 6.5mm spacer.

REAR SHOCKS
MOTOR INSTALL
BATTERY INSTALL

- BAG E - Step 43b**
- A x2** M3 Nyloc Nut
 - B x2** M3 Washer



- BAG E - Step 44**
- A x1** M3x 4 Grub Screw
 - B x1** M3x 6 Csk Hd Screw
 - C x2** M2.5x 6 Csk Hd Screw
 - D x2** M2.5 Alloy Insert



BATTERY INSTALL

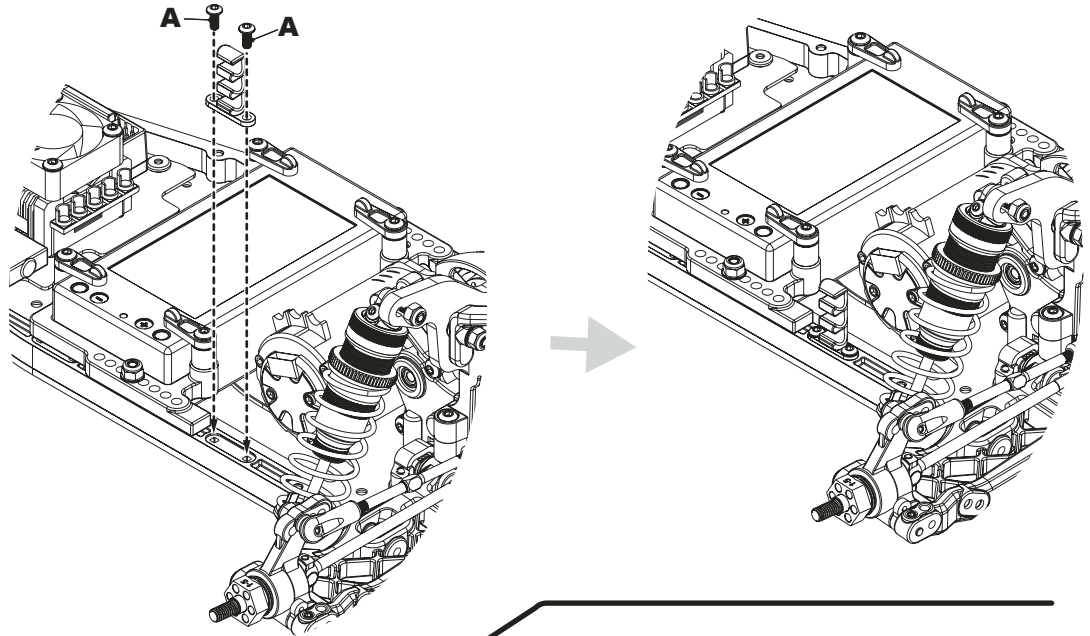
RADIO INSTALL

BAG E - Step 45

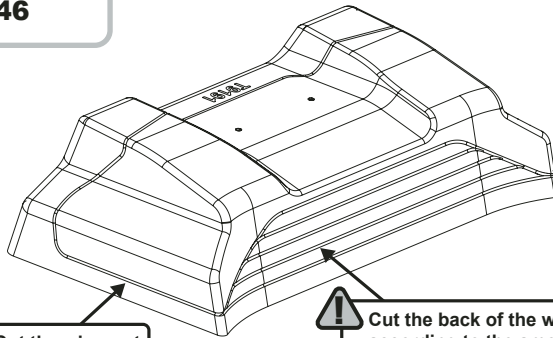
A x2



M2.5x 6 But Hd Screw

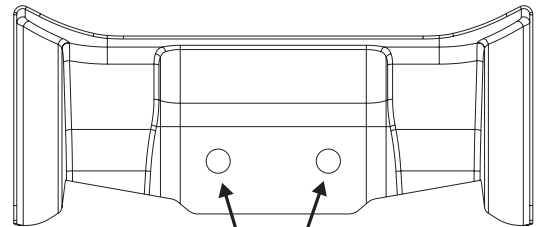


Step 46



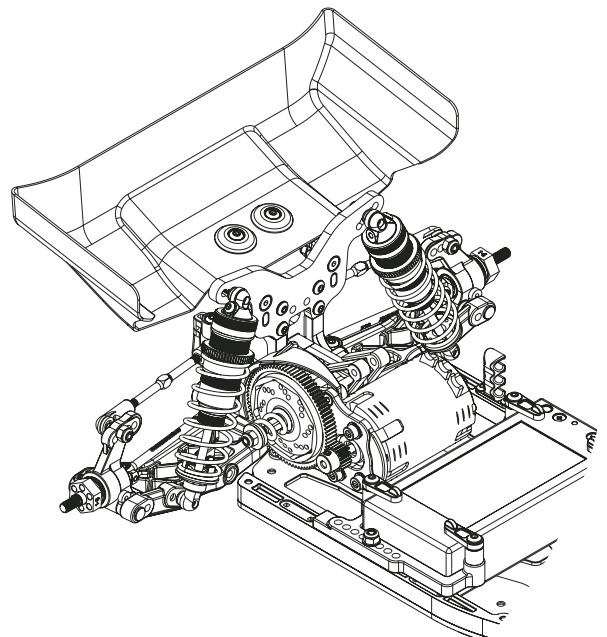
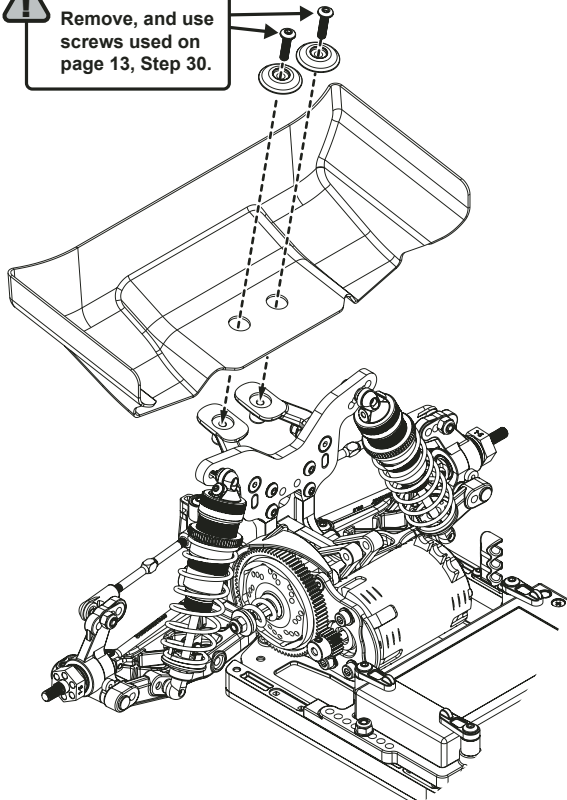
! Cut the wing out to the trim lines.

! Cut the back of the wing according to the amount of downforce required.

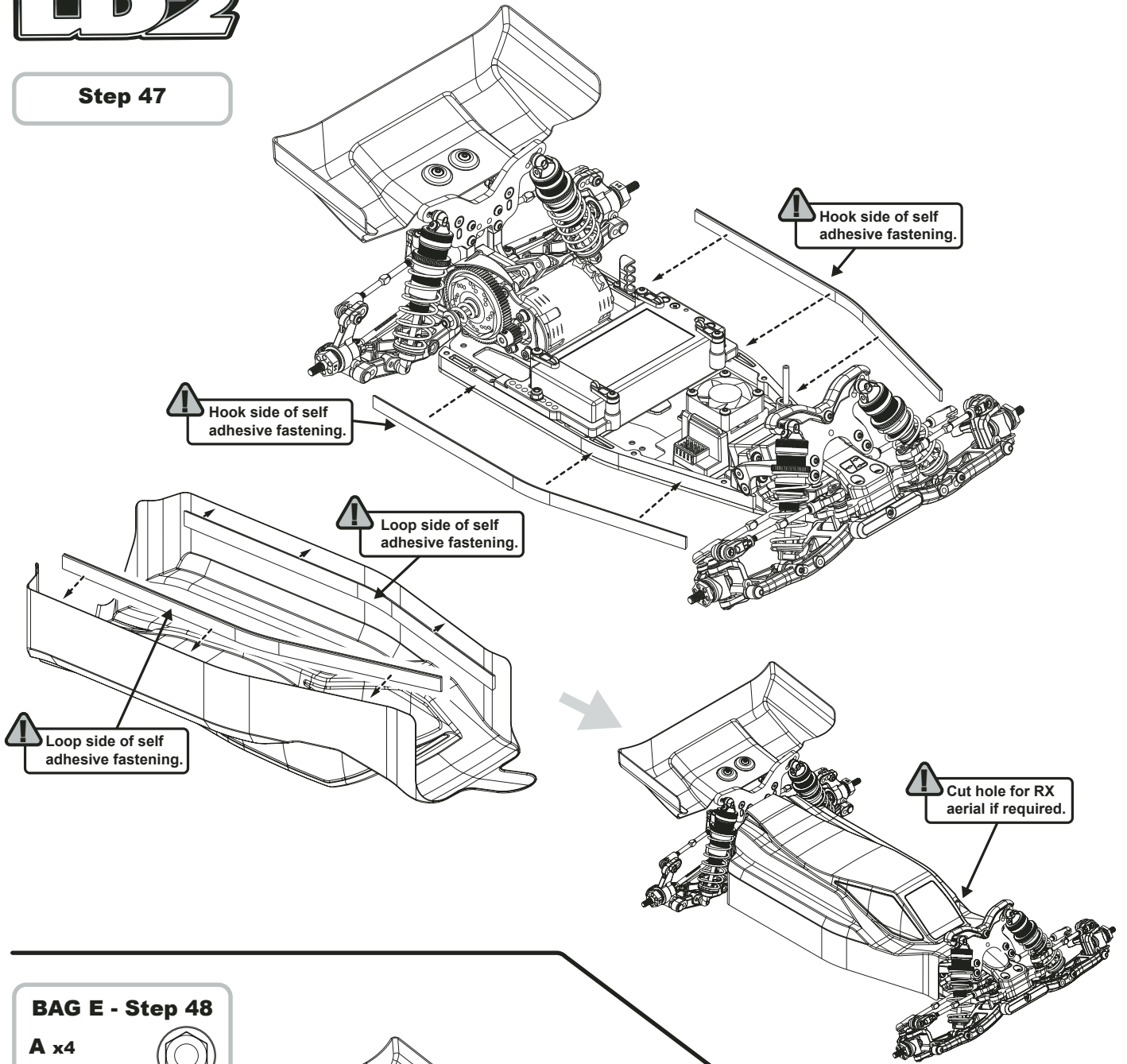


! Before painting, drill two 8.0mm mounting holes. We recommend using a body reamer.

! Remove, and use screws used on page 13, Step 30.



Step 47

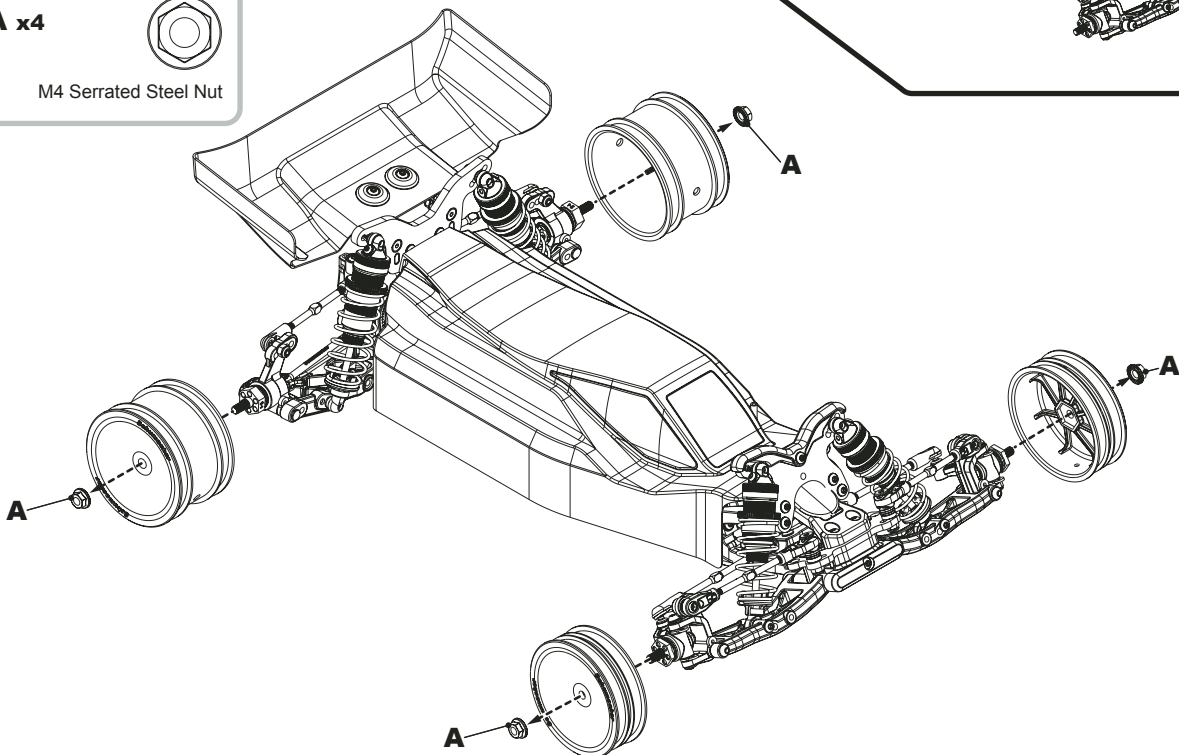


BAG E - Step 48

A x4



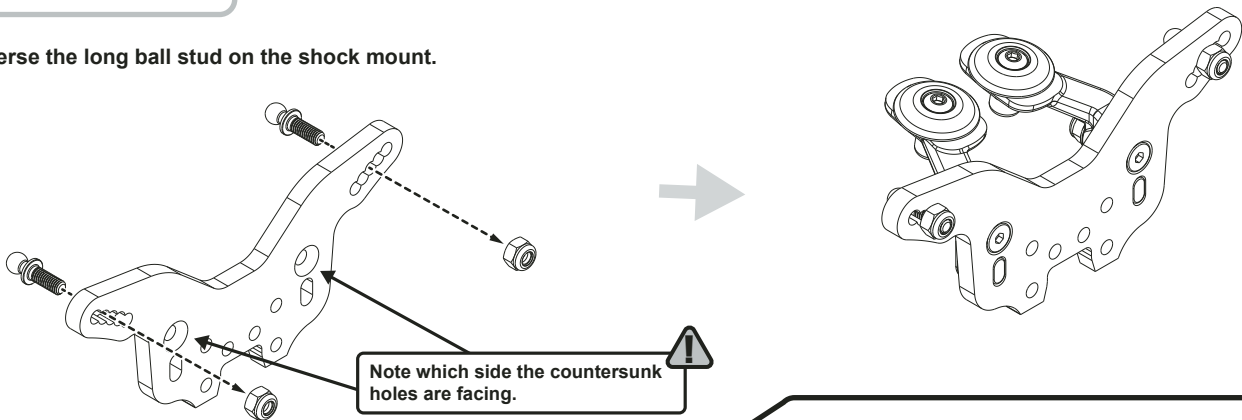
M4 Serrated Steel Nut



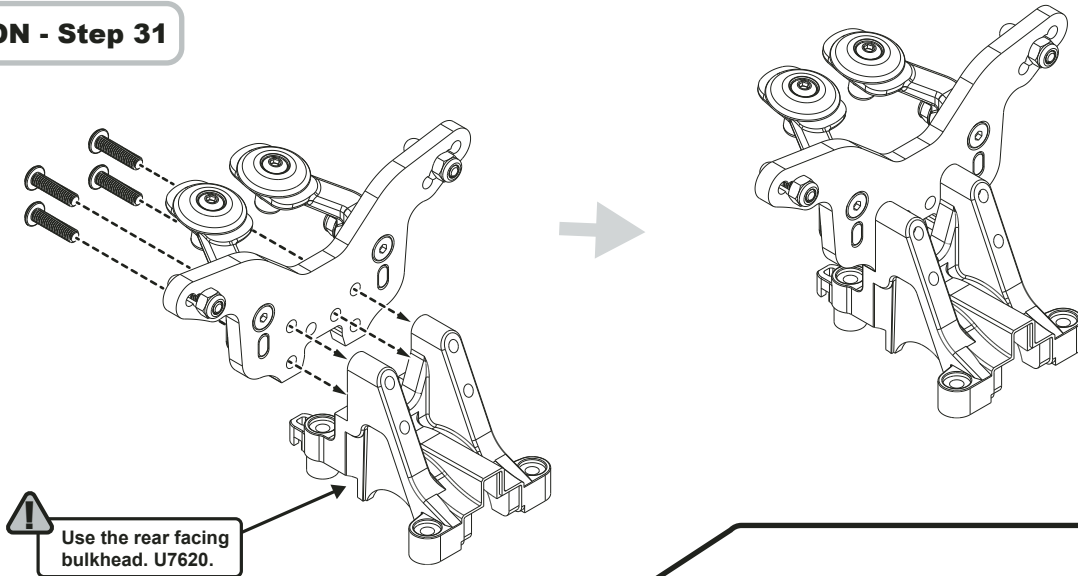
REAR SHOCKS, OPTION POSITION - Build Instructions

OPTION - Step 30

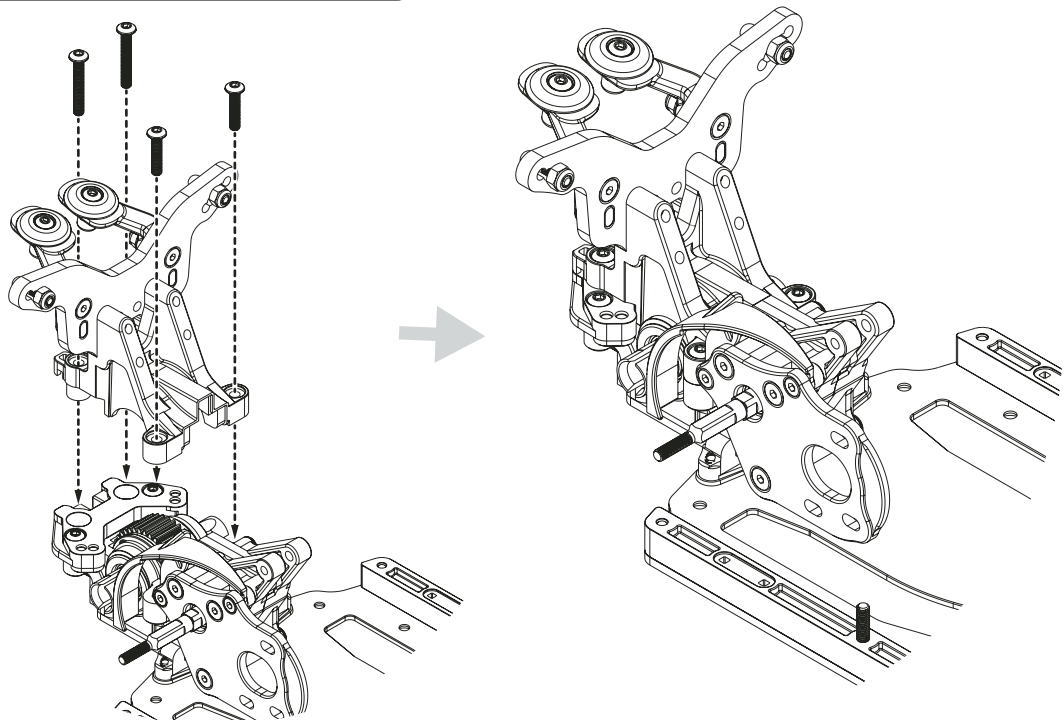
Reverse the long ball stud on the shock mount.



OPTION - Step 31

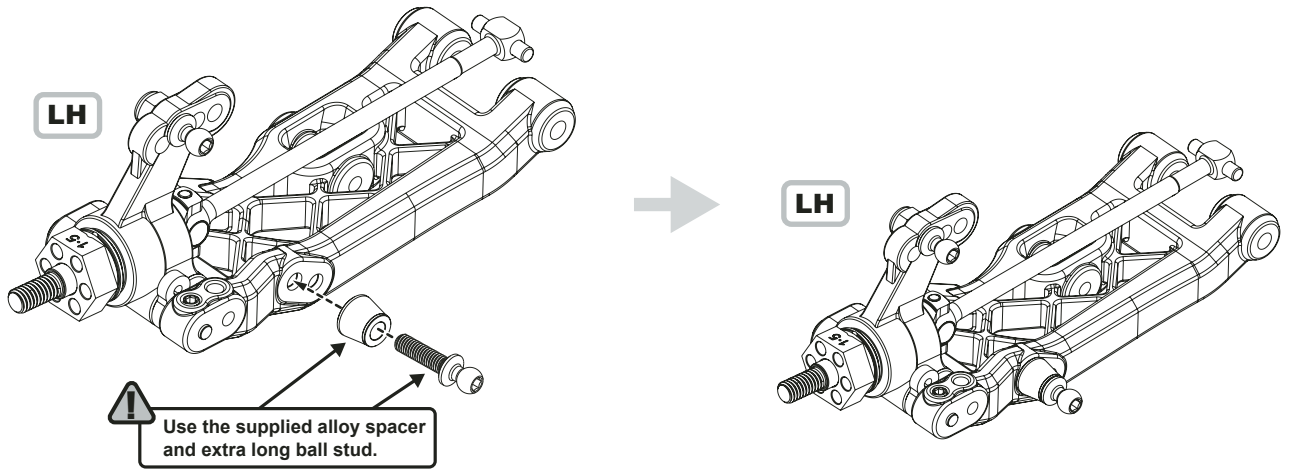
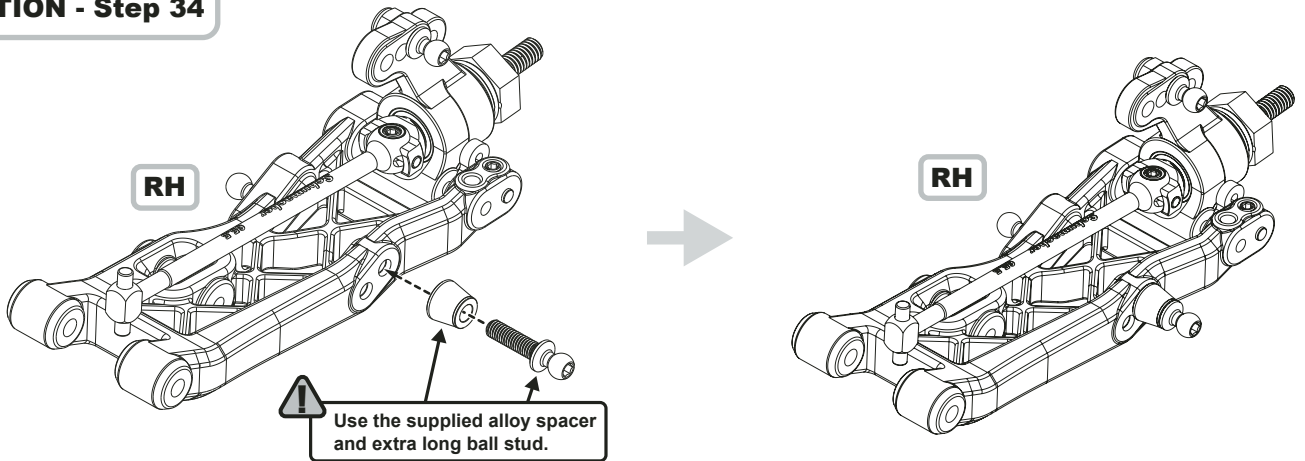


OPTION - Step 32

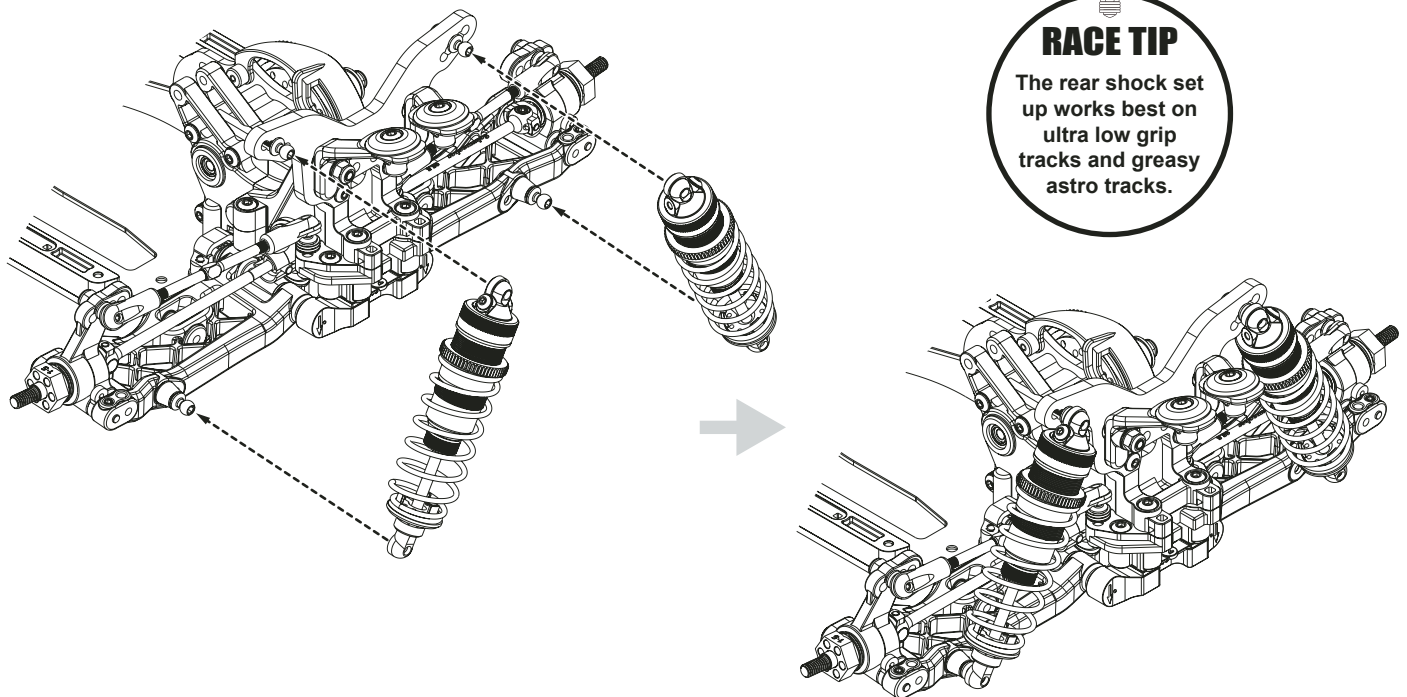


REAR SHOCKS, OPTION POSITION - Build Instructions

OPTION - Step 34





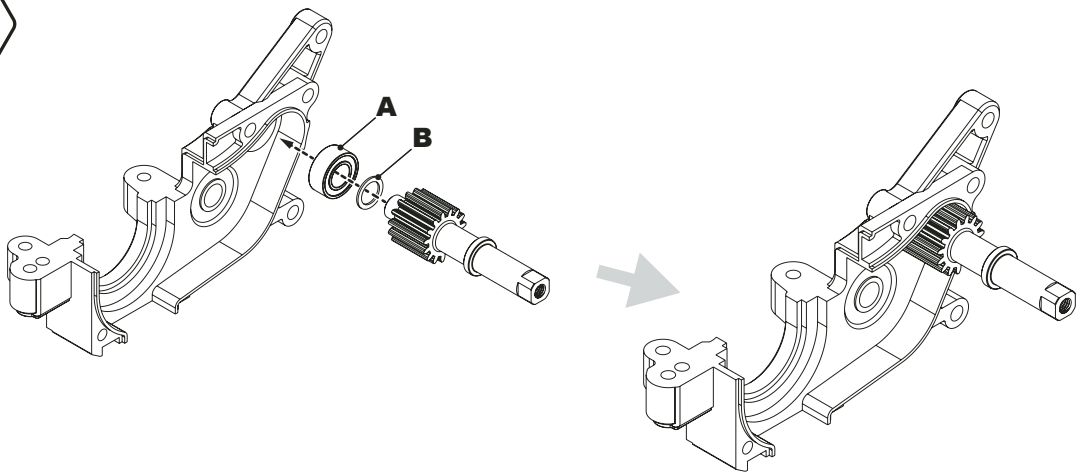
OPTION - Step 41







POWER
LD2
STOCK SPEC
MANUAL

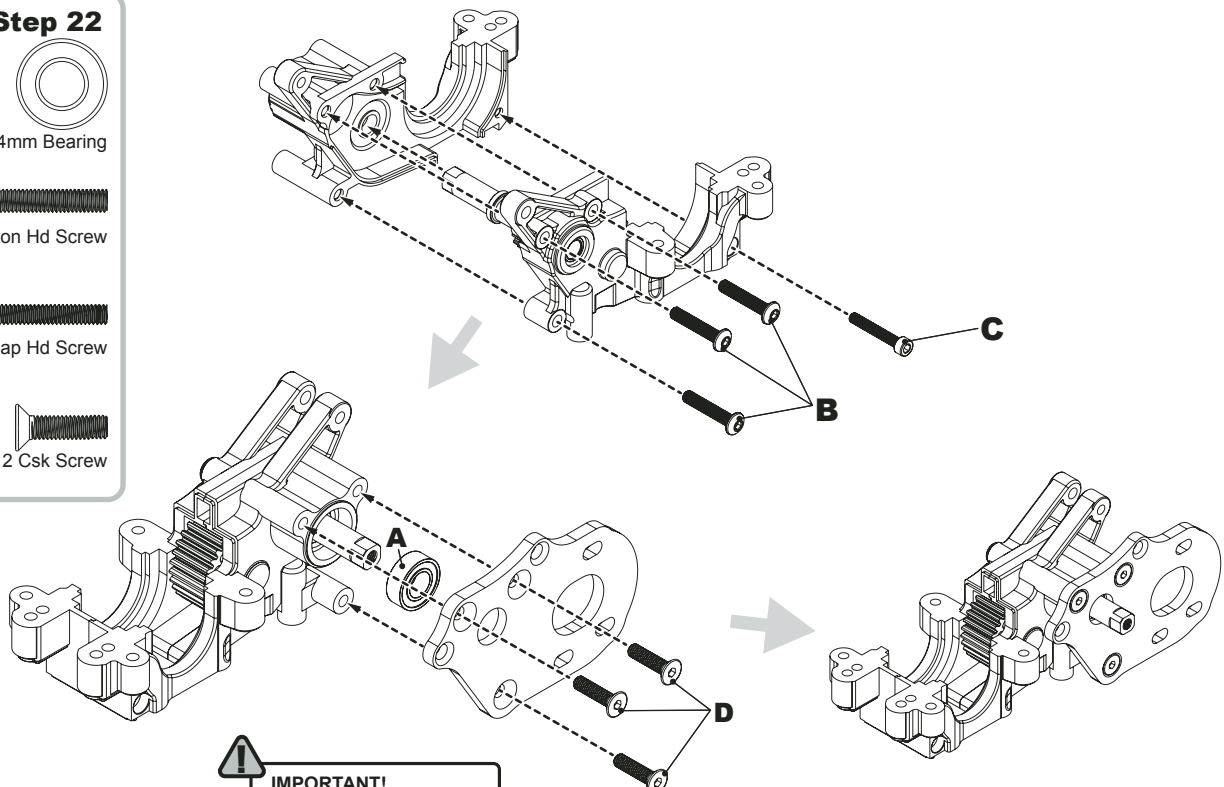
BAG C - Step 20

- A x1**  Ø5 x Ø10 x 4mm Bearing
- B x1**  Ø5 x Ø7mm Shim






BAG C - Step 22

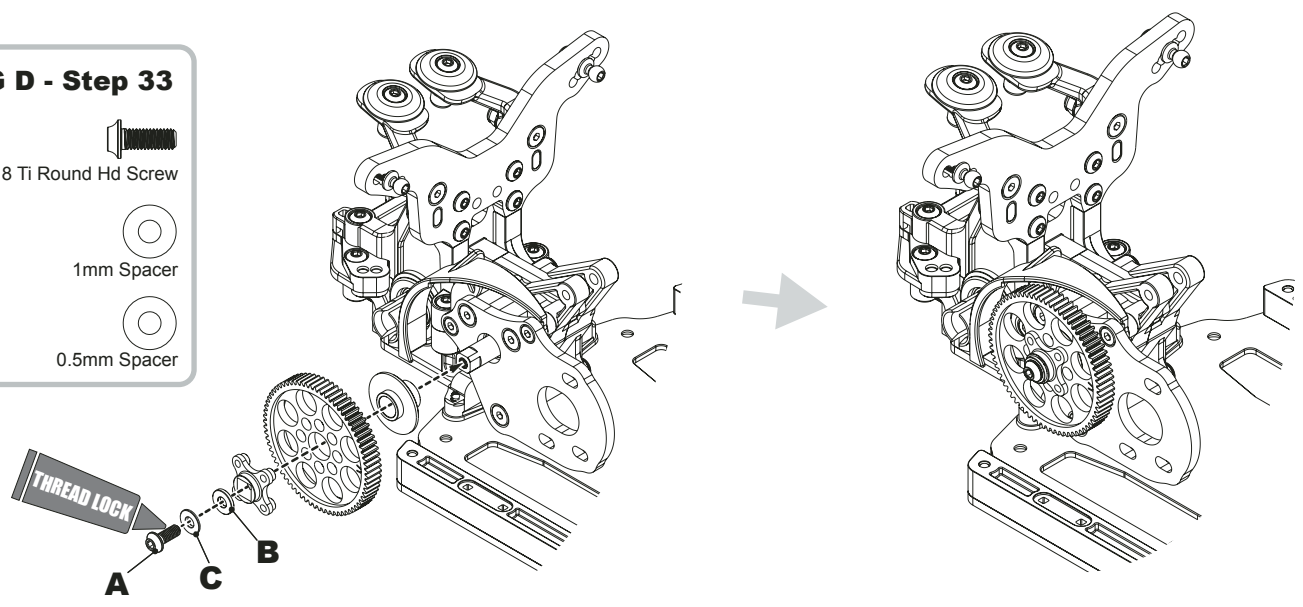
- A x1**  Ø6 x Ø12 x 4mm Bearing
- B x3**  M3x 16 Button Hd Screw
- C x1**  M2.5x 16 Cap Hd Screw
- D x3**  M3x 12 Csk Screw



! **IMPORTANT!**
Check the transmission
rotates freely.

BAG D - Step 33

- A x1**  M3x 8 Ti Round Hd Screw
- B x1**  1mm Spacer
- C x1**  0.5mm Spacer



TRACK SETTINGS

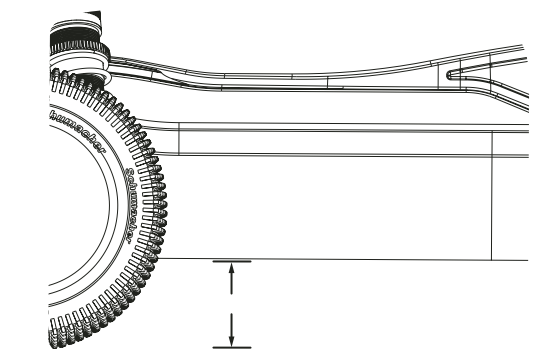
RIDE HEIGHT

Use the spring adjusters on the shock absorbers to adjust the front and rear ride heights. With the car level, we recommend setting the ride height to around 19mm on astro, 23mm on dirt and 14-16mm on carpet. (16mm if there are large jumps in the track).

This is measured between the bottom of the chassis and the ground with the car in running trim. First press the car down on to the ground and release it once or twice to settle the suspension before adjusting the ride height. The chassis should be level when viewed from the side.

Adjusting the spring collars does not increase or decrease the spring stiffness only the preload.

If the suspension needs to be softer or harder change the spring.



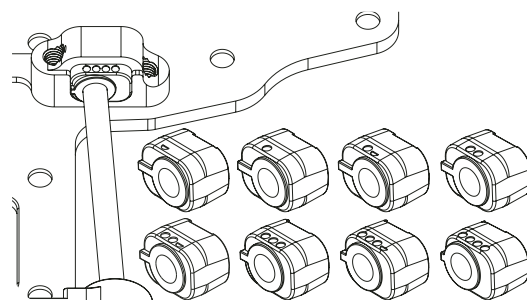
REAR TOE INSERTS

See Page 15 Bag D - Step 36

The base setting for rear toe in is 3°, this is a good compromise between forward traction and the car binding in the turns. This setting is fine for most tracks. You can alter the toe in by changing the toe in inserts. If you are running too much toe in, your car may suffer from instability at high speeds. Decreasing the toe in will reduce forward traction but will free the car up in the turns. Usually the team use less toe in on high grip tracks and more for low grip tracks.

A good starting position is 1.5° on carpet and 4.0° on low grip dirt and wet astro.

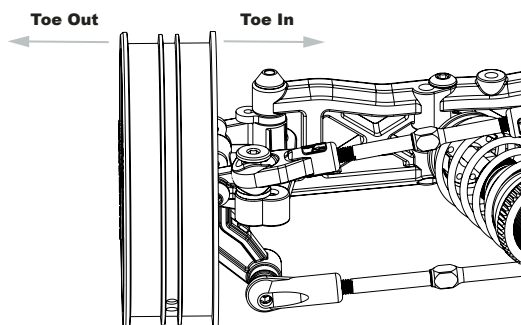
The eight blocks have indicators on top of them to show the amount of toe-in each one has. The range is 0.5° to 4.0°.



FRONT TOE

See Page 05 Bag B - Step 11

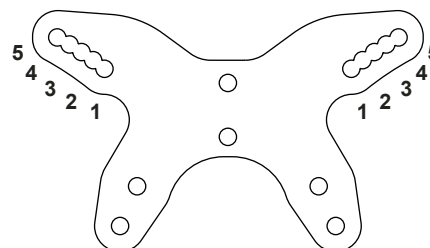
Front toe should be set to 0° (both front wheels pointing straight ahead) this will be the best setting for most track conditions. Adding toe out will increase initial turn in and make it smoother to drive on power. The team generally run 1° toe out on Astro tracks.



FRONT SHOCK MOUNT

See Page 04 Bag A - Step 07

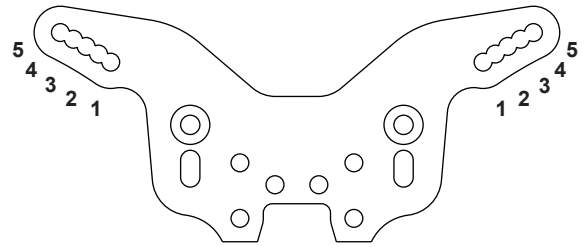
The middle hole on the front shock mount is the most widely used position. Moving the shock to the outer position will make the car react faster and increase the initial steering response, it will however stiffen the suspension which may require an oil and spring change so that the cars suspension feels the same. Moving the shock to the inner hole will soften the suspension and slow down the steering reaction and make the car smoother on bumpy tracks. Again you may need to alter the oil and spring combination to get the suspension correct again.



REAR SHOCK MOUNT

See Page 13 Bag D - Step 30

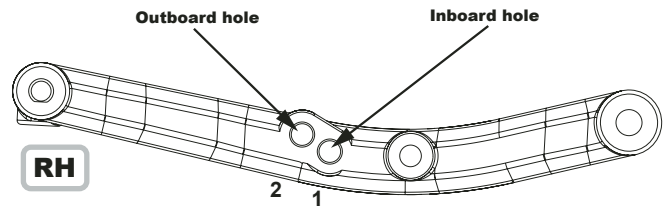
The middle hole on the shock mount (3) gives best all round results. Moving the shock to the outer hole will stiffen the suspension and increase the reaction of the steering. The downside is less compliance over bumpy sections of the track. Moving the shock to the inboard position softens the suspension and will slow the steering reaction making the car smoother over the bumps. Moving the shock to these holes may require an oil or spring change to maintain the suspension performance. The rear shock mount is assembled to the front of the transmission as standard, moving the mount to the rear of the transmission makes the car less reactive but more stable.



FRONT WISHBONE SHOCK MOUNTING HOLE

See Page 07 Bag B - Step 16

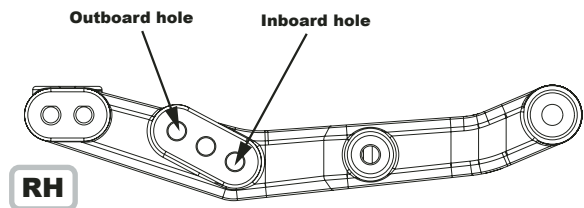
The outboard hole (2) on the wishbone is the standard setting for most tracks. Moving the shock to the inner hole makes the car more reactive. It increases the initial turn in and makes the front of the car roll more through the turns. This setting also makes the front end softer.



REAR WISHBONE SHOCK MOUNTING HOLE

See Page 14 Bag D - Step 34

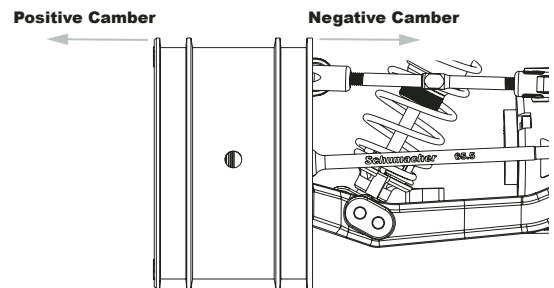
The middle hole works best for most track conditions giving good traction and drive through the turns whilst maintaining good stability over the bumps. Moving to the outer hole on the wishbone will decrease traction but will allow the rear to free up more in the turns. This setting would usually only get used on high grip tracks and when moving the shock out you may have to change the oil and spring settings to get the same suspension feel. If the grip level is low and the track is bumpy, try the inside hole with harder springs and thicker oil. This should help improve the handling.



REAR CAMBER

See Page 16 Bag E - Step 38a

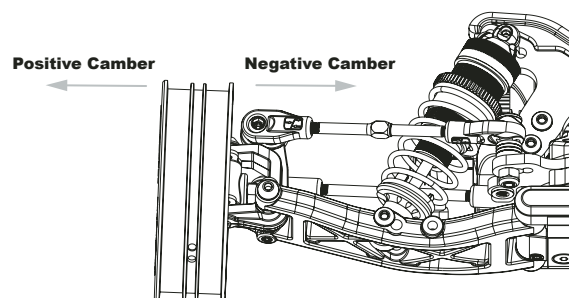
The usual team setting for static rear camber is 1° negative at ride height (the top of the tyre leaning inwards towards the car). Increasing the static rear camber will increase the traction when exiting the turns, but will be less stable at high speed. Decreasing the camber will reduce stability and traction in the turns but will be more stable at high speed.



FRONT CAMBER

See Page 03 Bag A - Step 05

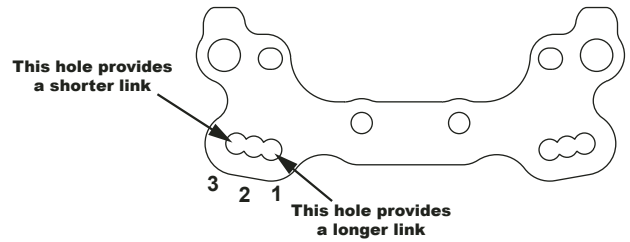
The usual team setting for static front camber is 1-2° negative at ride height (the top of the wheel is leaning inwards towards the car). Increasing the static camber will generally increase the mid corner steering, whereas decreasing the static camber usually makes the car smoother to drive by reducing the steering response.



FRONT CAMBER LINKS

See Page 03 Bag A - Step 05

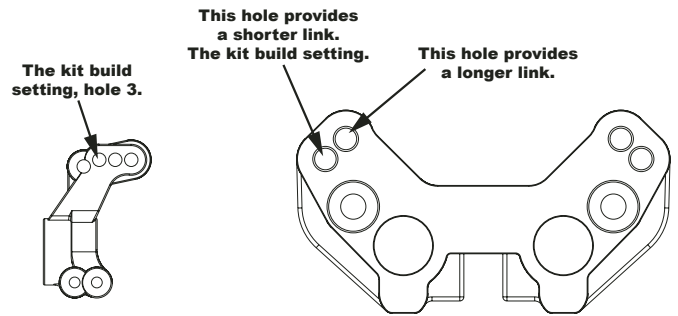
The kit settings for the front camber link position (3) and length are used by the team for most tracks. A shorter front link will make the car roll less and speed up the cars initial steering response. This is a better choice for bumpy, low grip tracks. A longer front link makes the front of the car roll more and offers less steering reaction at high speed. We would recommend this on fairly smooth high grip tracks. Lowering the ball height will offer more grip to the front, but can make the car feel more edgy.



REAR CAMBER LINK

See Page 17 Bag E - Step 38b

The kit setting for the rear camber link is the best compromise for most tracks. The outboard link option on the camber plate gives good stability and straight line traction while allowing the rear of the car to free up on high speed turns. This reduces power on understeer on high grip tracks. Shortening the rear camber link will make the rear of the car roll less in the corners, and square up faster when accelerating away from tight turns, longer links are generally used on high grip tracks and shorter links on low grip tracks. Lowering the inside ball stud will generate more grip, but reduce steering.



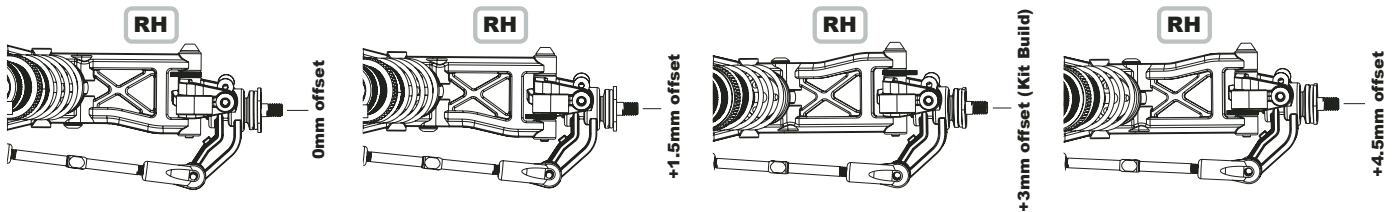
FRONT WHEELBASE OPTIONS & CHASSIS INSERT

See Page 08 Bag B - Step 17

See Page 04 Bag A - Step 08

There are three ways of adjusting wheelbase.

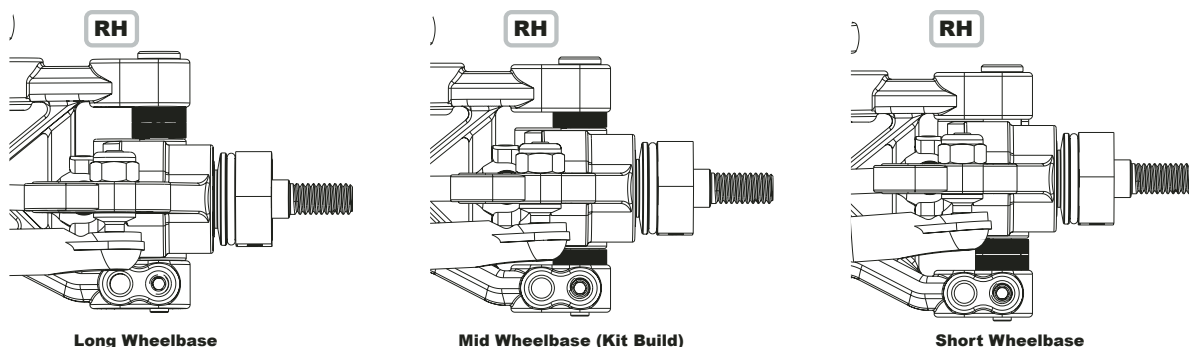
1. The adjustment is provided by re positioning the quick clip on the outer wishbone pin.
2. The front wishbone can be swapped left to right to alter the offset of the outer end of the wishbone. The std offset is forward. Swapping the wishbones left to right will move the front hub carrier rearwards by 1.5mm. This only moves the hub carrier, it will not affect the angle of the shock absorber. Moving the hub carrier rearwards will give more traction at the expense of stability over rough sections of the track, and moving the hub carrier forwards will usually improve stability over the rough sections.
3. By using the chassis insert, the chassis length can be increased by +5mm. This calms down the LD2 on twitchy or low grip tracks.



REAR WHEELBASE OPTIONS

See Page 14 Bag D - Step 34

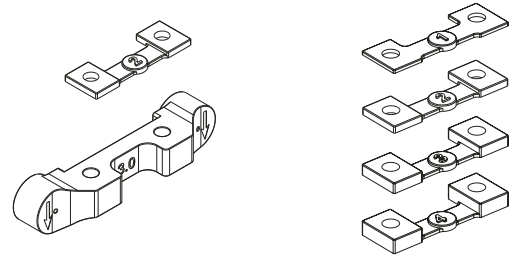
The Cougar LD2 has 3 wheelbase options at the rear, short, med and long. The adjustment is provided by re positioning the quick clips on the outer wishbone pin. Moving the rear hub carrier forwards will give more traction at the expense of stability over rough sections of the track, and moving the hub carrier to the middle or rear position usually improves stability over the rough sections, running the car in long wheelbase form also free's up the car on sweeping sections of the track. Generally you will run long wheelbase on carpet, mid on astro and short on dirt.



REAR ANTI SQUAT SPACERS

See Page 16 Bag E - Step 37

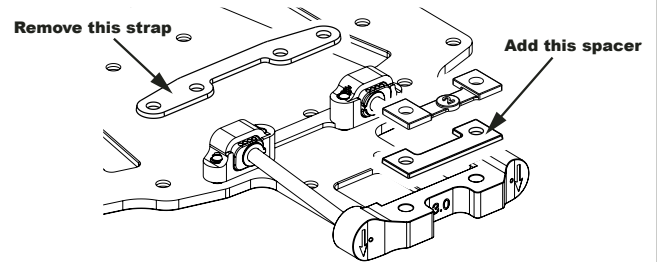
The Kit build anti squat is set at 2°. This works best on most tracks, and with the included parts can be increased or decreased. Generally less anti squat allows the suspension to work better over the large bumps and gives more power on steering. Reducing the anti squat makes the car handle better over small ripples, but not so good on the tracks with large bumps.



LOW ROLL CENTRE

See Page 09 Bag C - Step 19

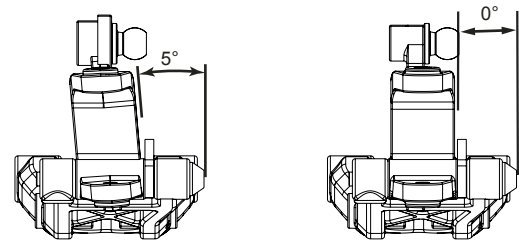
Lowering the kit pin height to pin low will give the rear more roll. This gives more side grip to the rear and more on power steering. If you are lifting a rear wheel going into corners then lower the pin or lay the rear shock over.



FRONT YOKE

See Page 04 Bag A - Step 08

The LD2 has a rake angle (kick up) of 25°. This should be added to the castor block angle to get the total castor angle. The standard car uses a 5° castor block making the standard car 30° in total. This can be decreased to 25° by using the optional 0° castor block. The 30° angle will increase on power steering and stability. The use of less castor will increase initial turn in.



FRONT & REAR HEX WIDTH

See Page 05 Bag B - Step 10 & Page 15 Bag D - Step 35

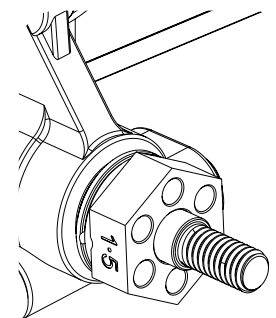
The base setting gives the best balance between steering and stability. Using a wider front hex will make the car more aggressive. Using a wider rear hex will help with more forward drive and initial turn in. Narrowing the rear will give more on power steering and increase side traction.

REAR HEX OPTIONS

Part Number	Hex	Car Width Change
U7646	-0.75	4.5mm Narrower
U7398	0.00	3.0mm Narrower
U7402	0.75	1.5mm Narrower
U7403	1.50	Kit Build
U7647	2.25	1.50mm Wider
U7648	3.00	3.00mm Wider

FRONT HEX OPTIONS

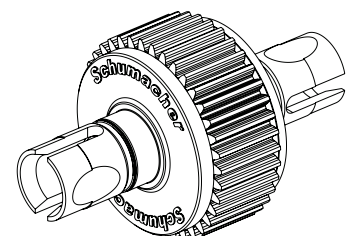
Part Number	Hex	Car Width Change
U7646	-0.75	Kit Build
U7398	0.00	1.5mm Wider
U7402	0.75	3.0mm Wider



GEAR DIFFERENTIAL

See Page 11 Bag D - Step 28b

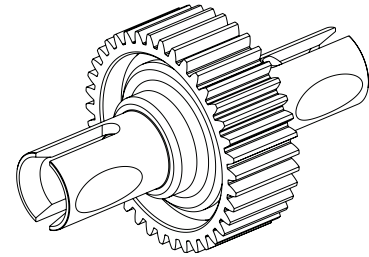
Geared Diffs can give variable driving characteristics. The handling of the diff is tuned by changing the oil. A recommended starting point is 12,000 cSt (CR229). Recommended option oils would be 10,000 cSt (CR222) and 7,000 cSt (CR221). Running two gears will give more drive and off power steering. Use 7,000cSt on high grip tracks, if you start spinning a wheel on power, go up on oil until it stops. We recommend changing the oil more often when running 2 gears.



BALL DIFFERENTIAL *Option

See Page 12 - Step 29

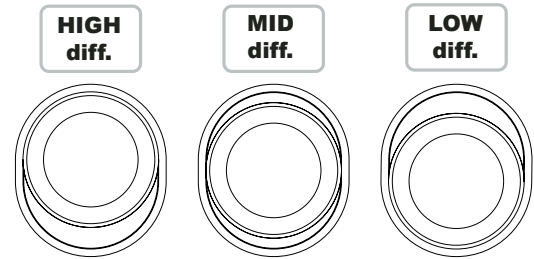
We recommend the ball differential is used for loose or wet conditions. For consistent performance it is vital that the differential action should be smooth and free. Diff adjustment is not a tuning aid and the diff should never be allowed to slip. A loose diff can usually be recognised by a "chirping" sound when powering away from turns or landing under power from large jumps. Never allow the diff to run dry and rebuild the diff regularly to maximise it's life.
U7698 - V3 BALL DIFF COMPLETE SV2/SVR/KD/LD/KR



DIFFERENTIAL HEIGHT

See Page 12 Bag D - Step 29

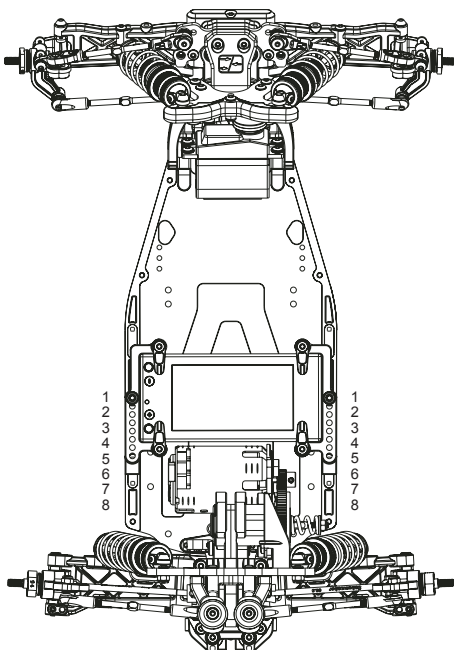
The base setting is Mid diff.
 Raising the diff is better for jump landings.
 Lowering the diff improves bump stability and allows you to run higher ride heights.
 Running the diff high on carpet will help remove side grip.
 On more open tracks a lower diff will help increase corner speed.



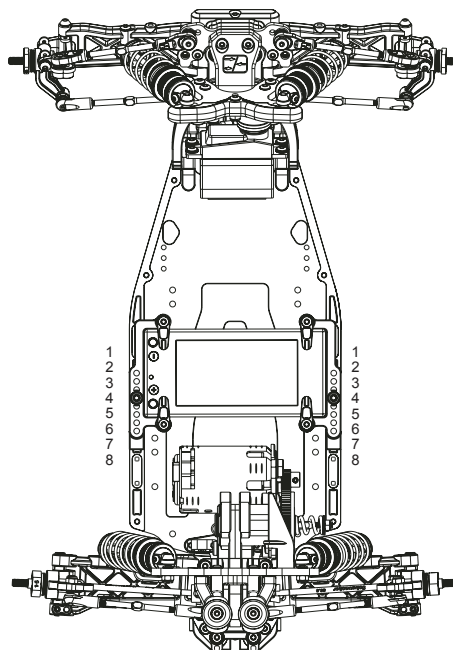
LIPO POSITION

See Page 20 Bag E - Step 43b

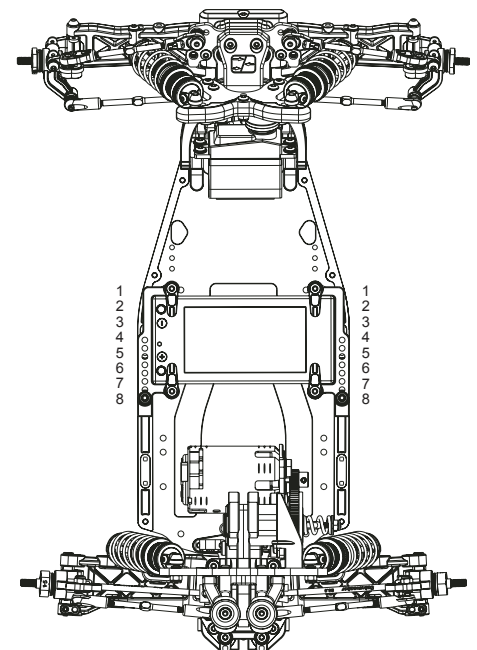
There are 8 shorty LiPo positions available to fine tune the chassis . For increased traction run the rearward LiPo position (Positions 6,7,8). For increased steering run the forward Lipo position (Positions 1,2,3). For a balanced feel run the mid LiPo position (Positions 4,5).



Position 1
(Max Rearward)



Position 4



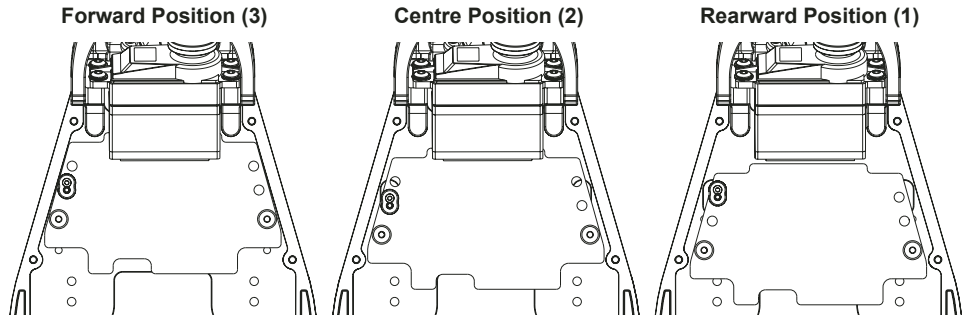
Position 8
(Max Forward)

RADIO TRAY POSITION

See Page 20 Bag E - Step 44

Similar to adjusting the LiPo position, the radio tray can be used to adjust the cars weight balance.

Running Kit Build forward position (3), you will have maximum steering and a settled front end while jumping. Moving the tray further back is better for twitchy or low grip conditions.

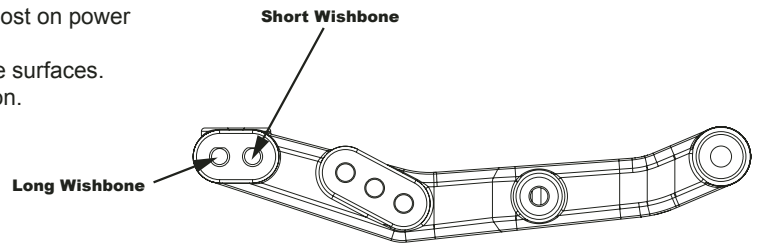


VARIABLE LENGTH REAR WISHBONES

See Page 14 Bag D - Step 34

The base setting is long wishbone. This setting gives the most on power steering and is the most stable on landing from jumps.

The short wishbone setting will give more rear grip on loose surfaces. When running this setting you need to soften the suspension.



GEAR RATIO (2.53:1)

See Page 19 Bag E - Step 42

Pinion Gear

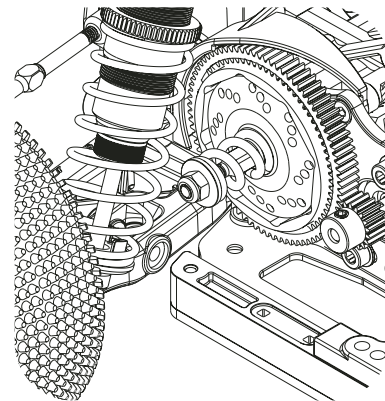
Spur Gear	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
80	11.91	11.24	10.65	10.12	9.64	9.20	8.80									
78			10.39	9.87	9.40	8.97	8.58	8.22	7.89							
76					9.16	8.74	8.36	8.01	7.69	7.40	7.12					
71										6.91	6.65	6.42	6.19	5.99	5.79	5.61

Tooth Sum 97 Minimum to 103 Maximum

SLIPPER CLUTCH

See Page 14 Bag D - Step 33

On most tracks it is best to start with the slipper on a **LOOSE** setting, and gradually tighten the spring tension until you achieve the most consistent drive away from turns without spinning the car or pulling wheelies. Make sure you still have enough drive when launching the car from the up ramps. **WARNING**, do not run the slipper too loose as it could melt the plastic spur gear, also too tight may damage the transmission parts. If you are generating too much heat at your preferred setting, use **U7418 - 3 Plate Slipper Conversion** this will give you a more durable slipper clutch.



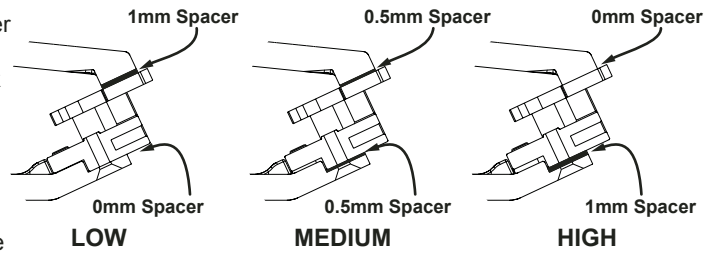
BATTERY X-BRACE *Option

When using the X-Brace, you will find the car has more steering response. It will also reduce some rear traction. Part number U7654.

PIVOT BLOCK HEIGHT *Option

See Page 02 Bag A - Step 03

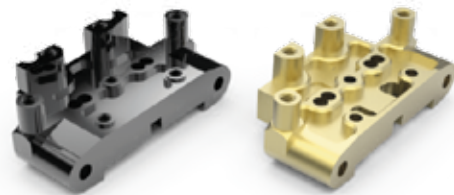
The LD2 provides the option to adjust the front pivot block height using spacers. The kit build pivot block position is high – 1mm spacer between the pivot block and bottom plate. The low position is achieved by removing the 1mm spacer from between the pivot block and bottom plate, and replacing it with the optional 1mm spacer between the link mount and top plate. The team have found when running in the lowest position that you reduce the initial steering a small amount, but in turn gain more corner speed and high speed steering. There is also an option to place the pivot block in the mid position, with a 0.5mm spacers located top and bottom (U8207). The pivot block spacing must always total 1mm (bottom+top).



PIVOT BLOCK WEIGHT *Option

See Page 02 Bag A - Step 01

The Black Alloy U8211 pivot block will help keep the front end down when the grip levels are high on astro style tracks. The Brass U8212 pivot block is best used on high grip carpet tracks and will help to increase steering.

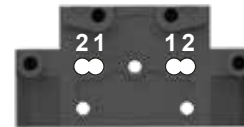


PIVOT BLOCK STEERING ARM MOUNTING

See Page 02 Bag A - Step 01

The kit build position of number 2 offers the most aggressive feel for the steering.

Position 1 will offer reduced aggression throughout the steering arc and feel smoother to drive. However, you MUST use either AX009 (25T) or AX010 (23T) alloy servo horns when using this option. See page 34.



ANTI-ROLL BARS (SWAY BARS) *Options

See Page 15 Bag D - Step 36

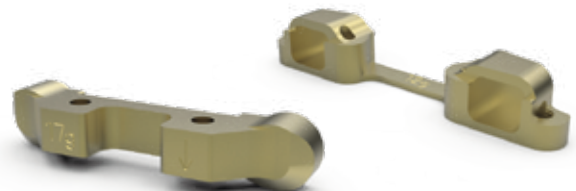
Anti-roll bars are an often overlooked set up aid that allows fine tuning of the suspension without major changes to the shock and spring settings. They are mainly used to add roll stiffness to the car without affecting the handling on bumps and jumps. Running anti-roll bars allows you to run softer suspension on bumpy tracks while reducing the roll in corners thus maintaining stability through the turns.

On the front use a 0.90mm anti-roll bar if you wish to keep the car flat in the corners. The rear anti-roll bar thickness is very dependent on the track surface/layout. On carpet, use a 1.2mm. On astro, start with a 1.0mm and for more initial steering try 1.1mm. If you need to use 1.2mm consider softening the rear spring.

TOE-IN STRAP WEIGHT F & R *Option

See Page 16 Bag E - Step 37

Using the optional U7663 Brass Rear Strap increases the weight by approx 17g over the back of the car helping with low grip conditions. For even more weight, use in conjunction with the U7665 Brass FR Strap. This will add approximately 12g.

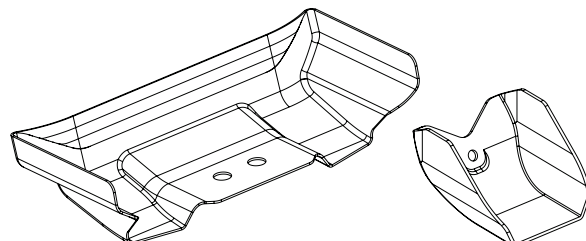


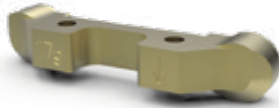
REAR WING & FRONT WINGS *Options

See Page 21 - Step 46

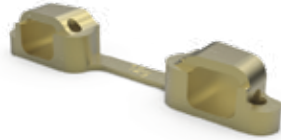
Both the front and rear wings will add downforce to the the car. Trimming the gurney on the rear wing will reduce the downforce.

If the front of the car goes high over the jumps cut away the gurney on the rear wing until stable flight is achieved. Adding the front wing will increase front downforce and help keep the nose down when jumping.

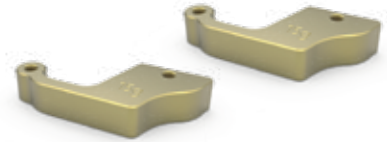




U7663 - Brass RR Strap 3.0 (17g)



U7665 - Brass FR Strap (12g)



U7664 - Brass Rear Weight (15g)



U7654 - C/F X-Brace Conversion



U7419 - Titanium M4 x 20 Grub Screw
Option for X-Brace



U7321 - Alloy Gear Diff Cross Pin



CR280 - Titanium Pro Ball Studs - Short (pr)
CR281 - Titanium Pro Ball Studs - Ultra Short (pr)
CR282 - Titanium Pro Ball Studs - Long (pr)



U7661 - Titanium Front Axle



U7424 - Alloy Lightweight LiPo nuts (pr)
Option for X-Brace



U7501 - Cff Wishbones Front - (pr)
U7081 - Stiff Wishbones Front - (pr)



U7646 - Alloy Wheel Hex (-0.75) - (pr)
U7398 - Alloy Wheel Hex (0.00) - (pr)
U7402 - Alloy Wheel Hex (0.75) - (pr)
U7403 - Alloy Wheel Hex (1.50) - (pr)
U7647 - Alloy Wheel Hex (2.25) - (pr)
U7648 - Alloy Wheel Hex (3.00) - (pr)



U7490 - Cff Wishbones Rear - (pr)
U7333 - Stiff Wishbones Rear - (pr)



U7404 - Alloy Radius Arms (pr)



U7406 - Titanium Rear Inboard Pivot Pin (pr)
U7470 - Titanium Front Inboard Pivot Pin 2WD (pr)



U7614 - Driveshaft Assembled UJ



U7474 - Titanium Captive Ball Joint
Extra Long (pr)



U7400 - Titanium Low Profile M4 Serrated Nut.



U7670 - Lockout 76T Spur Gear
U7671 - Lockout 71T Spur Gear



U7676 - Alloy Layshaft Conversion (Stock)
U7666 - Alloy Layshaft (Stock)
U7667 - Alloy Drive Plate (Stock)
U7668 - Alloy Thrust Plate (Stock)
U7669 - C/F Motor Plate (Stock)



U4946 - Pro Ball Bearing 5 x 10 x 4 sealed - (pr)
U7725 - Pro-Ball Bearing 10x15x4 Sealed - (pr)
U7726 - Pro-Ball Bearing 6x12x4 Sealed - (pr)
U7729 - Pro-Ball Bearing 5x9x3 Sealed - (pr)
U7730 - Pro-Ball Bearing 4x8x3 Sealed - (pr)



U4890 - Alloy Spring Seat - 2WD/4WD (pr)



U7434 - Alloy Med Shock Body Kashima Coat (pr)
U7435 - Alloy Long Shock Body Kashima Coat (pr)

U8196 - Servo Saver Mouldings
U8197 - Servo Saver Kit



U7658 - Rear Roll Bar Conversion
U7660 - Rear Roll Bar Set (5pcs)
U7659 - ARB Mounting Collar
U7031 - Socket Grey 8mm (pk4)
U4800 - Rear Roll Bar Ball (pk2)



U4620 - Alloy Hub Carrier 2WD Front L/R (pr)



U7412 - Alloy Rear Hub Carriers 2WD/4WD (pr)



U8215 - Front Roll Bar Wires (pk4)
U8216 - Front Roll Bar Kit - LD2



U4228 - Alloy Yokes - 5deg - 2WD (pr)
U3712 - Moulded Yokes - 0deg - 2WD (pr)



U7994 - Alloy Diff Complete - LD2,LD,KD,KR



U7651 - Alloy Rear Link Mount



U8205 - Alloy Centre Track Rod



U8206 - Alloy Front Link Mount



U8209 - C/F Front Shock Mount
U7656 - C/F Rear Shock Mount
U8208 - C/F Chassis - LD2

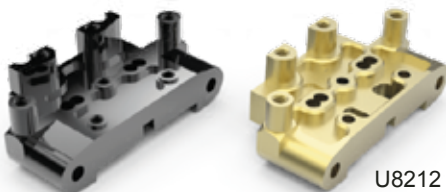


U8207 - Alloy Pivot Block Spacers 0.5mm

U4999 - Front Brass Weight (24g)



U7418 - 3 Plate Slipper Clutch Conversion
U7615 - 80T 2,3,4 Plate Slipper Spur Gear
U7616 - 78T 2,3,4 Plate Slipper Spur Gear



U8212 - Brass Pivot Block (41g)

U8211 - Alloy Pivot Block (17g)



U8210 - C/F Filled Side Pods (24.6g pr)



U7318 - Titanium Turnbuckle - 53mm - Silver (pr)
U7319 - Titanium Turnbuckle - 60mm - Silver (pr)
U7673 - Titanium Turnbuckle - 56mm - Silver (pr)
U7674 - Titanium Turnbuckle - 76mm - Silver (pr)
U7857 - Titanium Turnbuckle - 71mm - Silver (pr)



AX009 - AEROX Alloy Servo Arm - Short 25t Futaba
AX010 - AEROX Alloy Servo Arm - Short 23t KO/SANWA

SPARES LISTS

Chassis Parts

U119	Aerial Tube - Pack 4
U3691	Servo Spacer - Cougar SV/SV2/KR/KF
U4689	Steering Pivots Short - K2,KF2,Mi6/evo,KD,KC,LD,ST
U4773	Aerial Mount - CAT K2
U7339	Front Carpet Protector - CAT L1
U7627	Motor Wire Support - Cougar-Laydown
U7639	S2 Rear Shock Mount - Cougar-Laydown
U7952	Wing Mount Mouldings - CAT L1 EVO
U7970	M2.5 Thread Insert pk10 - L1 EVO,ST
U8005	Side Pods Stiff - LD2 (pr)
U8051	Radio Plate S2 - Storm ST
U8187	Top Plate - LD2
U8188	Bottom Plate - LD2
U8190	Wheelbase Plates - LD2
U8191	Bumper - LD2
U8192	Manual - LD2
U8194	LiPo Mouldings - LD2
U8195	Servo Horn Fixed Mouldings - LD2
U8198	Centre Track Rod - LD2
U8199	Alloy Chassis - LD2
U8203	S2 Front Link Mount - LD2

Bodys & Decals

AX005	Aerox Wing CAT L1 - 1.0mm
AX019	Aerox Front Wing - LD2
PCB007	Penguin Emperor Wing - 1mm
PCB010	Penguin King Wing - 1mm
PCB018	Penguin LD2 Body + Mask - 0.75mm
PCB019	Penguin LD2 Body + Mask - 0.50mm
U8193	Decals - LD2

Suspension

U3708	Quick Clips 2.4 x 2.0mm (pk4) - 2WD/4WD
U3715	Pivot Pin; Screw Type 25mm pr
U3729	WishbonePivot Spheres - Cougar SV pk4
U3758	Yokes; 5 deg - Cougar
U4224	Turnbuckle Adjuster HTT - 60mm - pr
U4274	Pro Ball Stud Short - pk4
U4275	Pro Ball Stud Long - pk4
U4380	Front Hub Carriers - Cougar KR/KF V2 -pr
U4381	Quick Clips 2.4 x 1.0mm (pk4) - 2WD/4WD
U4700	Pro Ball Stud - Ultra Long - (pk4)
U4704	Fluted Ball Grippa - Grey (pk8)
U4707	Short Ball Grippa - Grey (pk8)
U4736	Ball Stud Washer -CAT K2 - (8pcs)
U4739	Captive Ball Joint Ultra Long 4pcs - Off Road
U7079	Front Outboard Pivot Pin (pr) - Cougar KC/D
U7080	Rear Suspension Strap - Cougar KC/D
U7083	Rear Strap Spacers - Cougar KC/D
U7133	Quik Clips 2.4x1.5mm (pk4) - 2WD/4WD
U7135	Front Wishbones Med Flex Yellow Dot - KC,KD,LD
U7337	Radius Arms pr - L1/EVO
U7368	Rear Outboard Pivot Pin - CAT L1 (pr)
U7628	Rear Toe-In Inserts - Cougar-Laydown (8prs)
U7634	Strap Spacers - Cougar-Laydown (2pcs)
U7635	Front Axle - Cougar-Laydown (pr)
U7636	Rear Link Mount - Cougar-Laydown
U7644	Alloy FR Strap - Cougar-Laydown
U7649	Alloy Shock Standoff - Cougar-Laydown (pr)
U7672	Turnbuckle Adjuster HTT - 56mm - (pr)
U7675	Shock Pivot Ball 5.5mm (pk4)
U7833	Ball Stud Low (Short) (pk4)
U7867	Long Socket 5.5mm (pr)
U7948	Rear Hub Carrier - (pr) L1/EVO,ST
U7987	Rear Wishbones Med Flex - CAT L1/EVO
U8189	Pivot Block - LD2
U8200	Front Inboard Pivot Pin - LD2 (pr)
U8201	Rear Inboard Pivot Pin - LD2 (pr)
U8202	S2 Front Shock Mount - LD2
U8204	S2 Front Pivot Block Spacers - LD2

Transmission

U2761	Diff Shims; 10x12x0.2 (pk8)
U3364	Slipper Pad; PTFE Octagon pr
U3834	Driveshaft; Pivot;Pin;Screw - Mi4/Mi5/KR 1pc
U4083	Slipper Spacer - Cougar SVR
U4176	Gear Diff Gear Set - K1/KF
U4385	Gear Diff Rebuild Kit - KR/Laydown
U4386	Gear Diff Output - Cougar KR
U4387	Gear Diff Mouldings - Cougar KR
U4486	Rear Wheel Bearing Spacers - Cougar KF - Pair
U4674	Slipper Spring Bush - KF2
U4712	Gear Diff O-Rings
U4990	Layshaft - Cougar KD
U7065	Slipper Spring Twin Plate - 2WD/4WD
U7066	Diff Output Pin (pr) - Cougar KC
U7068	Eccentrics - Cougar KC (2 prs)
U7403	Alloy Wheel Hex 7.5mm - CAT L1 (pr)
U7615	80T 2,3,4 Plate Slipper Spur Gear
U7617	Right Hand Lower Trans - Cougar-Laydown
U7618	Left Hand Lower Trans - Cougar-Laydown
U7619	Upper Trans Forward - Cougar-Laydown
U7620	Upper Trans Rearward - Cougar-Laydown
U7622	Idler Shaft - Cougar-Laydown
U7624	Diff Cross Pin - Cougar-Laydown
U7629	Finger Guard - Cougar-Laydown
U7639	S2 Rear Shock Mount - Cougar-Laydown
U7645	Alloy Motor Plate - Cougar-Laydown
U7646	Alloy Wheel Hex (-0.75) - Cougar-Laydown (pr)
U7662	CVD Rear Axle - Cougar Laydown
U7700	Gear Diff Complete - Cougar Laydown
U7701	CNC Idler Gear - Cougar Laydown v2
U7980	0.5mm 20T Bevel Gear Shim - L1 EVO,ST
U8015	Inner Slipper Plate - Storm ST
U8016	Outer Slipper Plate - Storm ST
U8270	Driveshaft Assembled CVD - Cougar-Laydown - (pr)
U8271	CVD Rear Bone - Cougar-Laydown

Bearings & Balls

U2698	Ball Bearing - 5x10x4 Red Seal - (pr)
U2699	Ball Bearing - 10x15x4 Red Seal - (pr)
U3075	Ball Bearing - 4x8x3mm Red Seal - (pr)
U3136	Ball Bearing - 5x8x2.5 - Shield (pr)
U3871	Ball Bearing - 5x9x3 Red Seal - (pr)
U4084	Ball Bearing - 6x12x4 Red Seal - (pr)
U4946	Pro Ball Bearing 5 x 10 x 4 sealed - pr
U7088	Ball Bearing 5x10x4 Red Seal FL - (pr)
U7328	Ball Bearing - 5 x 11 x 4 Red Seal - (pr)
U7725	Pro-Ball Bearing 10x15x4 Sealed - (pr)
U7726	Pro-Ball Bearing 6x12x4 Sealed - (pr)
U7729	Pro-Ball Bearing 5x9x3 Sealed - (pr)
U7730	Pro-Ball Bearing 4x8x3 Sealed - (pr)
U7997	Ceramic Ball Bearing 6 x 12 x 4 (pr)

Big Bore Shocks

RI-29101	Ride Shock Air Remover - Long
U3667	Big Bore Shock; Rebuild Kit - Off Rd pk4
U3670	Big Bore Piston; 2 Hole White 1.5 (pr)
U3706	Rod End Ball + Socket - Cougar SV2 pr
U3770	Big Bore Piston; 3 Hole White 1.5 Rounded (pr)
U4110	Off Road Shock O Ring 1/8 Silicone Pk 8
U4451	Big Bore Shock Collar O-ring - pk4
U4508	Big Bore Pro Bush - Off Road
U4701	Big Bore Piston - 3 Hole Black 1.6 Rounded (pr)
U4702	Shock Seal Housing V2 - Big Bore - (pr)
U7084	Shock Top Ring (pr) - Cougar KC/D
U7085	Shock Top (pr) - Cougar KC/D
U7086	Big Bore Piston - 2 Hole Black 1.60 (pr)
U7087	Big Bore Piston - 2 Hole Red 1.70 (pr)
U7131	Front Shocks (Excluding Springs) - Cougar KC/KD/LD
U7132	Rear Shocks (Excluding Springs) - Cougar KC/KD/LD
U7388	Alloy Med Shock Body - CAT L1 (pr)

SPARES LISTS

Big Bore Shocks Cont.

U7389	Alloy Long Shock Body pr - LD,L1/EVO,ST
U7390	Alloy Spring Adjuster - CAT L1 (pr)
U7431	Rod End Socket (Dia 5.5mm) (pk4)
U7433	Big Bore Piston - Blank Tapered (pr)
U7625	Spring Hanger Low - (pr)
U7630	Shock Piston Support - Cougar-Laydown (pr)
U7631	Piston; 3 hole - 13mm - Red - Off Road (pr)
U7632	Tapped Shock Shaft; Med - Off Road (pr)
U7633	Tapped Shock Shaft; Long - Off Road (pr)
U7728	M2.5x4 Button Screws (pk10)

Big Bore Springs

CR177	CORE RC Big Bore Spring Tuning Set; Med 7prs
CR178	CORE RC Big Bore Spring Tuning Set; Long 7prs
CR179	Big Bore Spring; Med White - 2.8 pr
CR180	Big Bore Spring; Med Red - 3.1 pr
CR181	Big Bore Spring; Med Green - 3.4 pr
CR182	Big Bore Spring; Med Blue - 3.7 pr
CR183	Big Bore Spring; Med Black - 4.0 pr
CR184	Big Bore Spring; Long White - 1.8 pr
CR185	Big Bore Spring; Long Red - 2.0 pr
CR186	Big Bore Spring; Long Green - 2.2 pr
CR187	Big Bore Spring; Long Blue - 2.4 pr
CR188	Big Bore Spring; Long Black - 2.6 pr
CR635	Big Bore Spring; Med Orange - 4.3 pr
CR636	Big Bore Spring; Med Yellow - 4.6 pr
CR699	Big Bore Spring; Long Orange - 2.8 pr
CR700	Big Bore Spring; Long Yellow - 3.0 pr
CR808	High Response Spring; Long Red - 2.0 lb/in (pr)
CR809	High Response Spring; Long Green - 2.2 lb/in (pr)
CR810	High Response Spring; Long Blue - 2.4 lb/in (pr)
CR811	High Response Spring; Long Black - 2.6 lb/in (pr)
CR812	High Response Spring Tuning Set Long 4prs

Hardware

CR024	CORE RC - Serrated M4 Steel Wheel Nut pk4
CR035	CORE RC - Serrated Alloy M4 Nuts; Blue pk 4
CR036	CORE RC - Serrated Alloy M4 Nuts; Violet pk 4
CR196	CORE RC - Serrated Alloy M4 Nuts - Black - pk4
U1548	SPEED PACK - M3 Washers
U1633	SPEED PACK - Small Pins (pk)
U1960	SPEED PACK - O Rings; Various
U2128	SPEED PACK - Grub-Set Screws M3 M4
U3021	SPEED PACK - M3x6 Csk Hd - (pk10)
U3022	SPEED PACK - M3x8 Csk Hd - (pk10)
U3023	SPEED PACK - M3x10 Csk Hd - (pk10)
U3131	SPEED PACK Alloy Spacers - M3x7mm 0.5;1;2mm (pk18)
U3572	SPEED PACK - M3x14 Grub Screw pk4
U3753	SPEED PACK - M2.5x6 Button Hd pk8
U3754	SPEED PACK - M2.5x10 Csk Hd pk8
U4124	SPEED PACK - Shims 5 x 7 x 0.4mm - pk6
U4210	SPEED PACK - Pinion Grub Screw Set pk10
U4220	'O' Ring 9.0x1.0 (pk10)
U4241	SPEED PACK - M3 Alloy Nyloc Nuts - Black - pk10
U4314	SPEED PACK - Alloy Black M3 Washers - 18pc
U4650	SPEED PACK - M3 Nyloc Nut Steel - Black (10pcs)
U4651	SPEED PACK M3x10 Grub Screws (10pcs)
U4652	SPEED PACK M3x2.5 Grub Screws (10pcs)
U4662	SPEED PACK - M3x4 Grub Screw - Cone Point (10pcs)
U7105	SPEED PACK - M3x10 Button Hd (pk10)
U7106	SPEED PACK - M3x12 Button Hd (pk10)
U7107	SPEED PACK - M3x16 Button Hd (pk10)
U7108	SPEED PACK - M3x20 Button Hd (pk10)
U7112	SPEED PACK - M3x8 Cap Hd (pk10)
U7122	SPEED PACK - M3x12 Csk Hd (pk10)
U7123	SPEED PACK - M3x16 Csk Hd (pk10)
U7609	SPEED PACK - M3x16 Grub Screw (pk10)
U7610	SPEED PACK - M2.5x16 Cap Hd (pk10)
U7611	SPEED PACK - M3x14 Button Hd (pk10)
U7677	SPEED PACK - M2.5x8 Csk Hd (pk10)

U7689	M3 Brass Inserts - pk10
U7699	Foam Strips 40 x 6 x 2mm thk - pk20
U7707	M3 Steel Washers (pk10)
U7709	M3 Black Alloy Washers 0.75mm (pk10)
U7710	M3 Black Alloy Washers 1.00mm (pk10)
U7711	M3 Black Alloy Washers 2.00mm (pk10)
U7712	M3 Black Alloy Washers 3.00mm (pk10)
U7791	SPEED PACK M2.5 x 4 CSK (pk4)
U7900	SPEED PACK Needle Roller 1.5x9.8 (pk10)

Option Parts

AX009	Aerox Alloy Servo Arm - Short 25T Futaba
AX010	Aerox Alloy Servo Arm - Short 23T KO/Sanwa
CR280	Ti Pro Ball Studs - Short - (pr)
CR282	Ti Pro Ball Studs - Long - (pr)
CR304	Titanium Wheel Nuts M4 - pk4
CR720	Ti Pro Ball Studs - Ultra Long - pk 2
KRC-CLEAR	Klinik RC Premium Clear Shock O-Rings (8)
KRC-INSERTS	Klinik RC M3 Thread Repair Inserts (10)
KRC-LDCAMBER	Klinik RC Rear Camber Mount - Laydown
KRC-M3REPAIR	Klinik RC M3 Thread Repair Kit with Drill Bit (10)
KRC-TBLD	Klinik RC Cougar Laydown Ti Turnbuckle Set
U3348	Gear; CNC 80t Spur - Slipper
U3499	Roll Bar Blocks - Mi4 pk4
U3712	Yokes; 0 deg - Cougar SV/SV2/KR/KF
U3790	Gear; CNC 76T Spur - Slipper
U4226	Gear; CNC 71T Spur - Slipper
U4228	Alloy Yokes - 2WD - 5deg - Cougar
U4299	Turnbuckle HT - 52mm - pr
U4620	Alloy Hub Carrier 2WD Front L/R - pr
U4765	Lipo Post Nut - CAT K2 - (2pcs)
U4778	LiPo Stops - CAT K2 - (4pcs)
U4890	Alloy Spring Seat - Off Road - pr
U4999	Front Brass Weight - KC/D 24g
U7031	Socket Grey 8mm (pk4)
U7045	Lipo Posts Standard - Cougar KC/D
U7046	Lipo Posts Short - Cougar KC/D
U7081	Front Wishbones Stiff - KD,KC,LD
U7090	SPEED PACK - M4x20 Grub Screw (pk4)
U7318	Titanium Turnbuckle - 53mm - Silver - pr
U7319	Titanium Turnbuckle - 60mm - Silver - pr
U7321	Gear Diff Alloy Cross Pin - KD/KC/K2 - pr
U7333	Rear Wishbones pr - LD,L1/EVO
U7398	Alloy Wheel Hex 6mm - CAT L1 (pr)
U7400	Titanium Low Profile M4 Serrated Nut (pk4)
U7402	Alloy Wheel Hex 6.75mm - CAT L1 (pr)
U7404	Alloy Radius Arms pr - L1/EVO
U7412	Alloy Rear Hub Carriers - Off Road (pr)
U7418	V2 3 Plate Slipper Clutch Conversion KC/KD/L1/LD
U7419	Titanium M4 x 20 Grub Screw (pr)
U7420	Alloy Adjustable Rear Wing Mount Set - Offroad
U7424	Alloy Lightweight LiPo Nut - (pr)
U7434	Alloy Med Shock Body Kashima Coat - CAT L1 (pr)
U7435	Alloy Long Shock Body Kashima Coat - CAT L1 (pr)
U7474	Captive Ball Joint Ti - Extra Long - pr
U7490	C/F Wishbones Rear - CAT L1 (pr)
U7501	C/F Wishbones - Front KC/KD - 2WD
U7614	Driveshaft Assembled UJ - Cougar-Laydown - (pr)
U7616	78T 2,3,4 Plate Slipper Spur Gear CNC
U7647	Alloy Wheel Hex (2.25) - Cougar-Laydown (pr)
U7648	Alloy Wheel Hex (3.00) - Cougar-Laydown (pr)
U7651	Alloy Rear Link Mount - Cougar-Laydown
U7654	C/F X-Brace Conversion - Cougar-Laydown
U7656	C/F Rear Shock Mount - Cougar-Laydown
U7658	Rear Roll Bar Conversion - Cougar-Laydown
U7659	ARB Mounting Collar - Cougar-Laydown
U7660	Rear Roll Bars - Cougar-Laydown (5pcs)
U7661	Titanium Front Axle - Cougar-Laydown (pr)
U7663	Brass RR Strap 3.0 (17g) - Cougar-Laydown
U7664	Brass Rear Weight (15g) - Cougar-Laydown (pr)
U7665	Brass FR Strap (12g) - Cougar-Laydown
U7673	Titanium Turnbuckle - 56mm - Silver - (pr)
U7674	Titanium Turnbuckle - 76mm - Silver - (pr)

SPARES LISTS

Option Parts Cont.

- U7676 Alloy Layshaft Conversion (Stock) - LD,ST
- U7678 Brass Radio Plate (30g) - Cougar-Laydown
- U7692 V3 Diff Washers + Balls
- U7693 V3 Diff Male Washer Carrier - KD/Laydown
- U7694 V3 Diff Female Washer Carrier - KD/Laydown
- U7695 V3 Diff Thrust Race
- U7696 V3 Diff T-Nut Inserts - (pr)
- U7697 V3 Ball Diff Service Kit
- U7698 V3 Ball Diff Complete KD/Laydown/KR
- U7839 C/F LiPo Swivel pr - Mi7,FT
- U7856 Turnbuckle Adjuster HTT - 71mm (pr)
- U7857 Titanium Turnbuckle - 71mm - Silver (pr)
- U7868 C/F Left Hand Lower Trans - LD,ST
- U7869 C/F Right Hand Lower Trans - LD,ST
- U7975 Alloy Eccentric Mid - KC,KD,LD,L1 & LE EVO (pr)
- U7976 Alloy Eccentric Hi-Lo - KC,KD,LD,L1 & L1 EVO (pr)
- U7982 Alloy Spring Seat High - Off Road (pr)
- U7984 Alloy LiPo Posts Short-KC,KD,LD,L1,L1 EVO-pr
- U7985 Alloy LiPo Post Spacer-KC,KD,LD,L1,L1 EVO (4)
- U7993 Alloy Diff Conversion - LD,KD,KR
- U7994 Alloy Diff Complete - LD,KD,KR
- U8035 Third Slipper Plate - Storm ST
- U8047 Titanium Layshaft - LD,KD
- U8196 Servo Saver Mouldings - LD2
- U8197 Servo Saver Kit - LD2
- U8205 Alloy Centre Track Rod - LD2
- U8206 Alloy Front Link Mount - LD2
- U8207 Alloy Pivot Block Spacers 0.5mm - LD2
- U8208 C/F Chassis - LD2
- U8209 C/F Front Shock Mount - LD2
- U8210 C/F Filled Side Pods - LD2 (pr)
- U8211 Alloy Pivot Block - LD2
- U8212 Brass Pivot Block - LD2
- U8215 Front Roll Bar Wires (4) - LD2
- U8216 Front Roll Bar Kit - LD2

Pinions

- U2306 17T Steel Pinion - 48 D.P.
- U2307 18T Steel Pinion - 48 D.P.
- U2308 19T Steel Pinion - 48 D.P.
- U2309 20T Steel Pinion - 48 D.P.
- U2310 21T Steel Pinion - 48 D.P.
- U2311 22T Steel Pinion - 48 D.P.
- U2312 23T Steel Pinion - 48 D.P.
- U2313 24T Steel Pinion - 48 D.P.
- U2314 25T Steel Pinion - 48 D.P.
- U2315 26T Steel Pinion - 48 D.P.
- U2316 27T Steel Pinion - 48 D.P.
- U2317 28T Steel Pinion - 48 D.P.
- U2318 29T Steel Pinion - 48 D.P.
- U2319 30T Steel Pinion - 48 D.P.
- U3417 Pinion; Hard Alloy 48dp - 17T
- U3418 Pinion; Hard Alloy 48dp - 18T
- U3419 Pinion; Hard Alloy 48dp - 19T
- U3420 Pinion; Hard Alloy 48dp - 20T
- U3421 Pinion; Hard Alloy 48dp - 21T
- U3422 Pinion; Hard Alloy 48dp - 22T
- U3423 Pinion; Hard Alloy 48dp - 23T
- U3424 Pinion; Hard Alloy 48dp - 24T
- U3425 Pinion; Hard Alloy 48dp - 25T
- U3426 Pinion; Hard Alloy 48dp - 26T
- U3427 Pinion; Hard Alloy 48dp - 27T
- U3428 Pinion; Hard Alloy 48dp - 28T

Pinions Cont.

- U3429 Pinion; Hard Alloy 48dp - 29T
- U3430 Pinion; Hard Alloy 48dp - 30T
- U3431 Pinion; Hard Alloy 48dp - 31T
- U3432 Pinion; Hard Alloy 48dp - 32T

Wheels

- U4365 Wheel; Hex Rear - Black - Off Road - pr
- U4366 Wheel; Hex Rear - White - Off Road - pr
- U4367 Wheel; Hex Front - Black - 2wd - pr
- U4368 Wheel; Hex Front - White - 2wd - pr
- U4660 Wheel; Hex - Slim - 2WD - Black
- U4661 Wheel; Hex - Slim - 2WD - White
- U7454 Wheel Front Slim 2WD - Neon Yellow v2 - pr
- U7455 Wheel Front Slim 2WD - Neon Yellow v2 - 5pr
- U7456 Wheel Front Med 2WD - Neon Yellow v2 - pr
- U7457 Wheel Front Med 2WD-Neon Yellow v2 - 5pr
- U7460 Wheel Rear Off-Road - Neon Yellow v2 - pr
- U7461 Wheel Rear Off-Road - Neon Yellow v2 - 5pr
- U7466 Wheel Front Slim 2WD - White - 5pr
- U7467 Wheel Front Med 2WD - White - 5pr
- U7469 Wheel Rear Off-Road - White - 5pr



- AM640033 64 Ti Screw Allen Round Head M3 x 8 (5)
- U7666 Alloy Layshaft (Stock) - Cougar-Laydown
- U7667 Alloy Drive Plate (Stock) - Cougar-Laydown
- U7668 Alloy Thrust Plate (Stock) - Cougar-Laydown
- U7669 C/F Motor Plate (Stock) - Cougar-Laydown
- U7670 Lockout 76T Spur Gear - Cougar-Laydown
- U7671 Lockout 71T Spur Gear - Cougar-Laydown
- U7868 C/F Left Hand Lower Trans - Cougar Laydown
- U7869 C/F Right Hand Lower Trans - Cougar Laydown
- U8208 C/F Chassis - LD2



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TYRES, WHEELS & INSERTS



2WD Slim Mini Spike 2

- U6549 - Blue Compound (pair)
- U6550 - Green Compound (pair)
- U6581 - Yellow Compound (pair)
- U6761 - Silver Compound (pair)



Low Profile 2WD Slim Cut Stagger

- U6770 - Yellow Compound (pair)
- U6771 - Green Compound (pair)
- U6775 - Silver Compound (pair)
- U6776 - Blue Compound (pair)



Rear Mini Spike 2

- U6516 - Green Compound (pair)
- U6518 - Blue Compound (pair)
- U6558 - Yellow Compound (pair)
- U6763 - Silver Compound (pair)



Rear 2.2" Full Spike

- U6596 - Yellow Compound (pair)



Rear Honeycomb

- U6863 - Yellow Compound (pair)



Rear Mini Dart

- U6826 - Yellow Compound (pair)
- U6829 - Blue Compound (pair)
- U6832 - Silver Compound (pair)



MEZZO

- U6885 - Yellow Compound (pair)
- U6886 - Silver Compound (pair)
- U6887 - Blue Compound (pair)



Rear Cactus

- U6838 - Yellow Compound (pair)
- U6842 - Silver Compound (pair)
- U6844 - Blue Compound (pair)

Wheels

Neon Yellow

- U7460 - Rear (Pair)
- U7461 - Rear (5 Pairs)
- U7456 - Front Med (Pair)
- U7457 - Front Med (5 Pairs)
- U7454 - Front Slim (Pair)
- U7455 - Front Slim (5 Pairs)

White

- U4366 - Rear (Pair)
- U7469 - Rear (5 Pairs)
- U4368 - Front Med (Pair)
- U7467 - Front Med (5 Pairs)
- U4661 - Front Slim (Pair)
- U7466 - Front Slim (5 Pairs)

Black

- U4365 - Rear (Pair)
- U4367 - Front Med (Pair)
- U4660 - Front Slim (Pair)



Tyres

Foam Inserts



Front Slim

- U6738 - Med (pair)
- U6667 - Hard (pair)



Front Med

- U6733 - Med (pair)
- CR689 - Closed Cell (pair)



Rear

- U6653 - Hard (pair)
- U6668 - Soft Ultra Wide (pair)
- U6669 - Hard Ultra Wide (pair)
- U6734 - Med (pair)
- U6747 - Med Tubby (pair)
- MC0002 - Cragg KWF (pair)
- CR687 - Closed Cell (pair)

Pre-Glued

Yellow Compound Tyres
White 12mm Hex Wheels

2WD Slim Front

- U6753 - Mini Spike
- U6755 - Mini Pin
- U6760 - Cut Stagger
- U6801 - Cut Stagger Low Pro
- U6833 - Mini Dart

2WD Med Front

- U6860 - Honeycomb

Rear

- U6792 - Mini Pin
- U6794 - Mini Spike2
- U6806 - Mini Pin 2
- U6818 - Mini Pin 1
- U6835 - Mini Dart
- U6839 - Cactus
- U6864 - Honeycomb

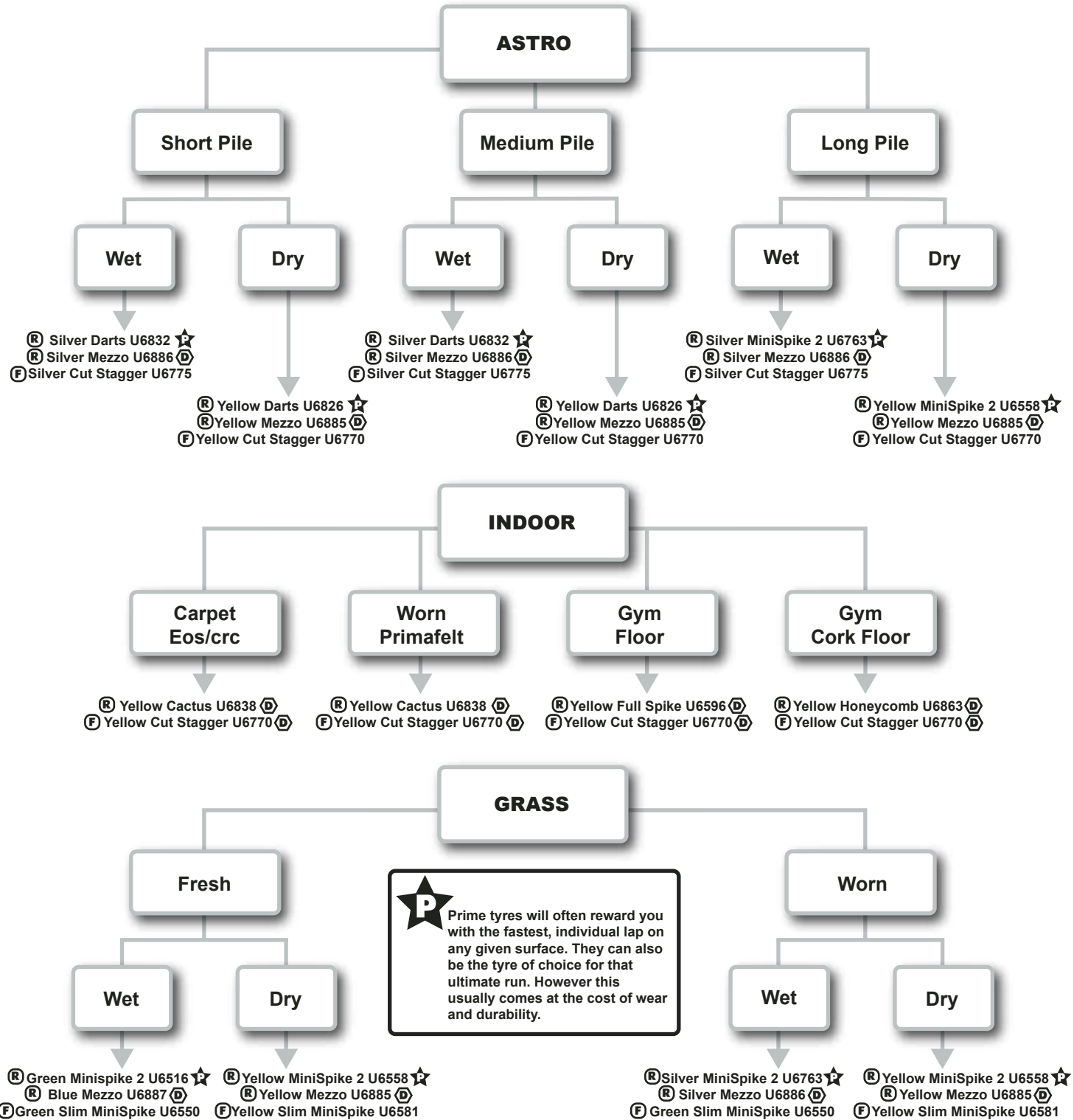
For the full and latest range of off-road tyres, scan the QR code.

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TYRE SELECTION

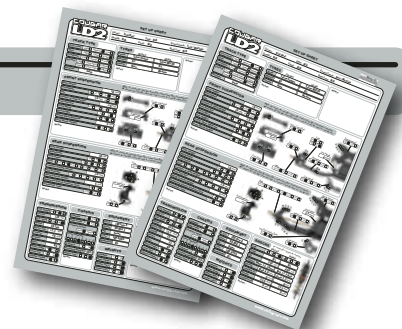
(R) = Rear Tyre ☆ = Prime
 (F) = Front Tyre (D) = Durable Performance



SET UP SHEETS

For the latest Cougar LD2 set up sheets from our top drivers around the world, scan the QR code.

Or visit www.racing-cars.com and check out Technical Information.





Driver: **Trish Neal** Date: **N/A** Event/Track: **Tests / Multiple**
 Qualify: **N/A** Final: **N/A** Best Lap: **N/A**

TRACK TYPE

Grip Level High Medium Low

Type Tight Open Mixed

Condition Flat Bumpy Mixed

Surface Clay Long Astro Carpet Grass Short Astro Mixed

Weather Sunny

TYRES

	FRONT	REAR
Tyres	Yellow Stagger	Yellow MEZZO
Wheels	Kit	Kit
Inserts	None	Medium

Notes:

Notes:

FRONT SUSPENSION

KEY: P = Plastic, A = Alloy, B = Brass, CF = Carbon Fibre, S2 = Schumacher Composite, M = Medium, S = Stiff, Sh = Short, H = High, L = Low, F = Front, R = Rear, Y = Yes, N = No

Ride Height mm

Wheelbase 0 +1.5 +3.0 +4.5

Toe deg In Out

Camber at Ride Height deg

Anti Roll Bar 0.9 1.0 1.1 1.2

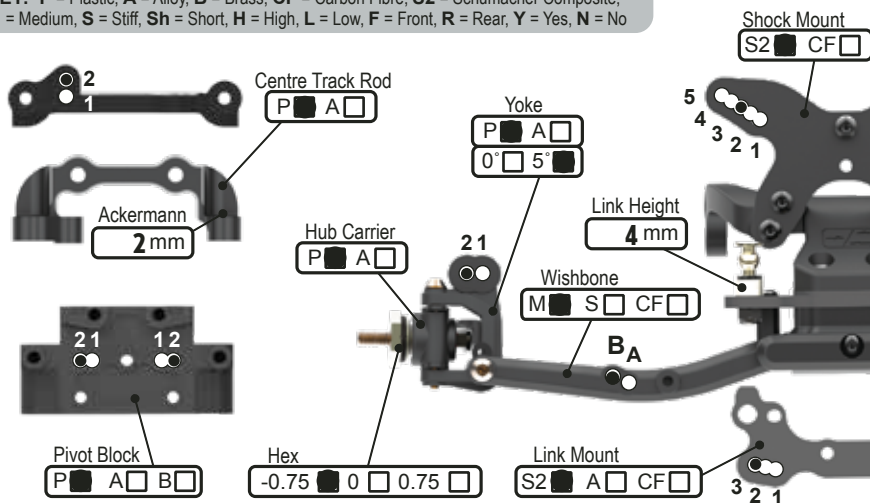
Front Wing Y N

Hub Height H M L

Bump Steer Washers mm

Pivot Block Height H M L

Notes:



REAR SUSPENSION

KEY: P = Plastic, A = Alloy, B = Brass, CF = Carbon Fibre, S2 = Schumacher Composite, M = Medium, S = Stiff, Sh = Short, H = High, L = Low, F = Front, R = Rear, Y = Yes, N = No

Ride Height mm

Wheelbase Sh M L

Anti-Squat 1° 2° 3° 4°

Toe 4° 3.5° 3° 2.5° 2° 1.5° 1.0° 0.5°

Camber at Ride Height deg

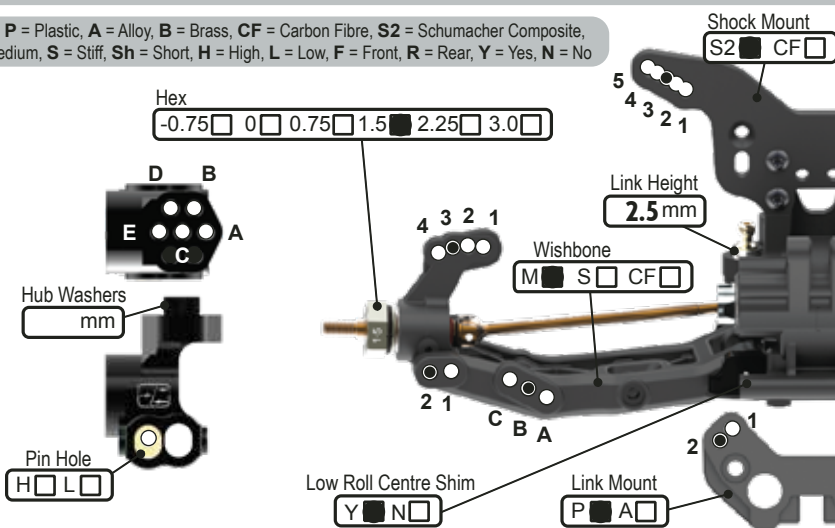
Anti Roll Bar 1.0 1.1 1.2 1.3 1.4

Wing Gurney Height mm

Rearward Shock Position Only A B

Driveshaft Type CVD U/J

Notes:



TRANSMISSION

Diff Height H M L

Diff Oil cSt

Diff Type B 2g 4g

Motor Turn

Rotor Dia. mm

Timing deg

Pinion t

Spur t

Motor Plate A CF

Lock Out Y N

Slipper Plates 2 3

CHASSIS

Chassis A C/F

Side Pods S C/F

Chassis Insert 0mm +5mm

LiPo Position 1 2 3 4 5 6 7 8

X Brace Y N

Running Weight g

Radio Tray 1 2 3

Notes:

EQUIPMENT

E.S.C. LRP Flow X

Servo KO RSX 3

RX Sanwa

LiPo LRP 4000

Bodyshell Kit

WEIGHTS

Chassis F R

Rear Strap F R

Radio Tray Y N

Under LiPo Y N

SHOCKS

KEY: i = Internal, e = External, V = Vented, S = Sealed, A = Aeration

	FRONT	REAR
Cap	<input type="checkbox"/> V <input type="checkbox"/> S <input type="checkbox"/> A	<input type="checkbox"/> V <input type="checkbox"/> S <input type="checkbox"/> A
Body	Kit	Kit
Oil	550 cSt	400 cSt
Piston	White 1.5 3 Hole	Red 1.7 3 Hole
Spring	Black 4.0 lb/in	Green 2.2 lb/in
Limiters (i)	<input type="text" value="0"/> mm	<input type="text" value="0"/> mm
Stroke	22.0 mm	27.3 mm
Limiters (e)	<input type="text" value="0"/> mm	<input type="text" value="0"/> mm

Notes:





Driver: _____ Date: _____ Event/Track: _____
 Qualify: _____ Final: _____ Best Lap: _____

TRACK TYPE

Grip Level High Medium Low
 Type Tight Open Mixed
 Condition Flat Bumpy Mixed
 Surface Clay Long Astro Carpet
 Grass Short Astro Mixed
 Weather _____

TYRES

	FRONT	REAR
Tyres	_____	_____
Wheels	_____	_____
Inserts	_____	_____

Notes:

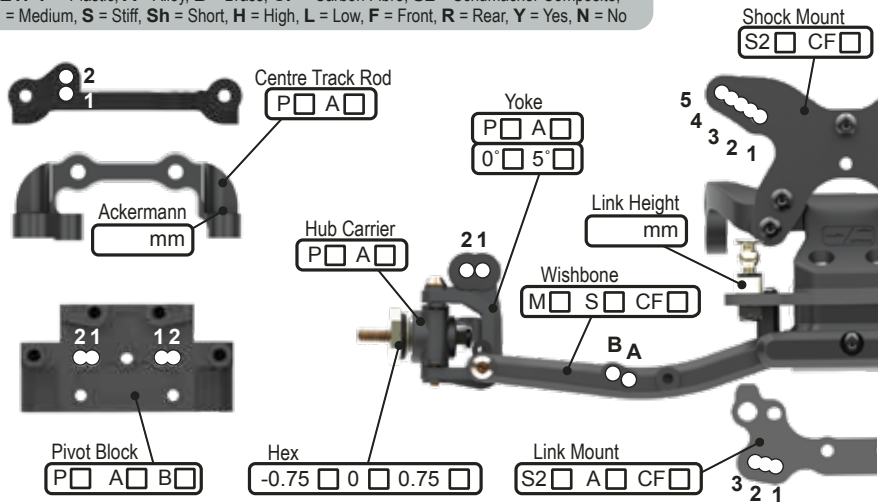
Notes:

FRONT SUSPENSION

KEY: P = Plastic, A = Alloy, B = Brass, CF = Carbon Fibre, S2 = Schumacher Composite, M = Medium, S = Stiff, Sh = Short, H = High, L = Low, F = Front, R = Rear, Y = Yes, N = No

Ride Height _____ mm
 Wheelbase 0 +1.5 +3.0 +4.5
 Toe _____ deg In Out
 Camber at Ride Height _____ deg
 Anti Roll Bar 0.9 1.0 1.1 1.2
 Front Wing Y N
 Hub Height H M L
 Bump Steer Washers _____ mm
 Pivot Block Height H M L

Notes:

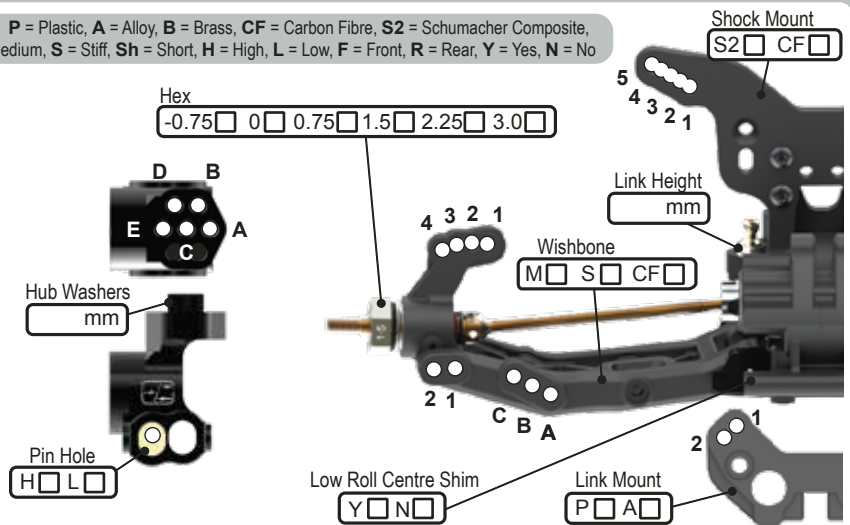


REAR SUSPENSION

KEY: P = Plastic, A = Alloy, B = Brass, CF = Carbon Fibre, S2 = Schumacher Composite, M = Medium, S = Stiff, Sh = Short, H = High, L = Low, F = Front, R = Rear, Y = Yes, N = No

Ride Height _____ mm
 Wheelbase Sh M L
 Anti-Squat 1° 2° 3° 4°
 Toe 4° 3.5° 3° 2.5° 2° 1.5° 1.0° 0.5°
 Camber at Ride Height _____ deg
 Anti Roll Bar 1.0 1.1 1.2 1.3 1.4
 Wing Gurney Height _____ mm
 Rearward Shock Position Only A B
 Driveshaft Type CVD U/J

Notes:



TRANSMISSION

Diff Height H M L
 Diff Oil _____ cSt
 Diff Type B 2g 4g
 Motor _____
 Rotor Dia. _____ mm
 Timing _____ deg
 Pinion _____ t
 Spur _____ t
 Motor Plate A CF
 Lock Out Y N
 Slipper Plates 2 3

CHASSIS

Chassis A C/F
 Side Pods S C/F
 Chassis Insert _____
 0mm +5mm
 LiPo Position
 1 2 3 4 5 6 7 8

 X Brace Y N
 Running Weight _____ g
 Radio Tray 1 2 3
 Notes:

EQUIPMENT

E.S.C. _____
 Servo _____
 RX _____
 LiPo _____
 Bodyshell _____

WEIGHTS

Chassis F R
 Rear Strap F R
 Radio Tray Y N
 Under LiPo Y N

SHOCKS

KEY: i = Internal, e = External, V = Vented, S = Sealed, A = Aeration

	FRONT	REAR
Cap	<input type="checkbox"/> V <input type="checkbox"/> S <input type="checkbox"/> A	<input type="checkbox"/> V <input type="checkbox"/> S <input type="checkbox"/> A
Body	_____	_____
Oil	_____ cSt	_____ cSt
Piston	_____	_____
Spring	_____ lb/in	_____ lb/in
Limiters (i)	_____ mm	_____ mm
Stroke	_____ mm	_____ mm
Limiters (e)	_____ mm	_____ mm

Notes:

