Schumacher

S1594

COUGAR™

Classic

Instruction Manual ISS01

TEAM SCHUMACHER WORLD CHAMPIONS

Schumacher

71-73 Tenter Road
Moulton Park
Northampton
NN3 6AX

www.racing-cars.com

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

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

1/4” Nut Driver - AM150263

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 Grease10ml - 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.

LH — Left-Hand Side of car

RH — Right-Hand Side of car

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

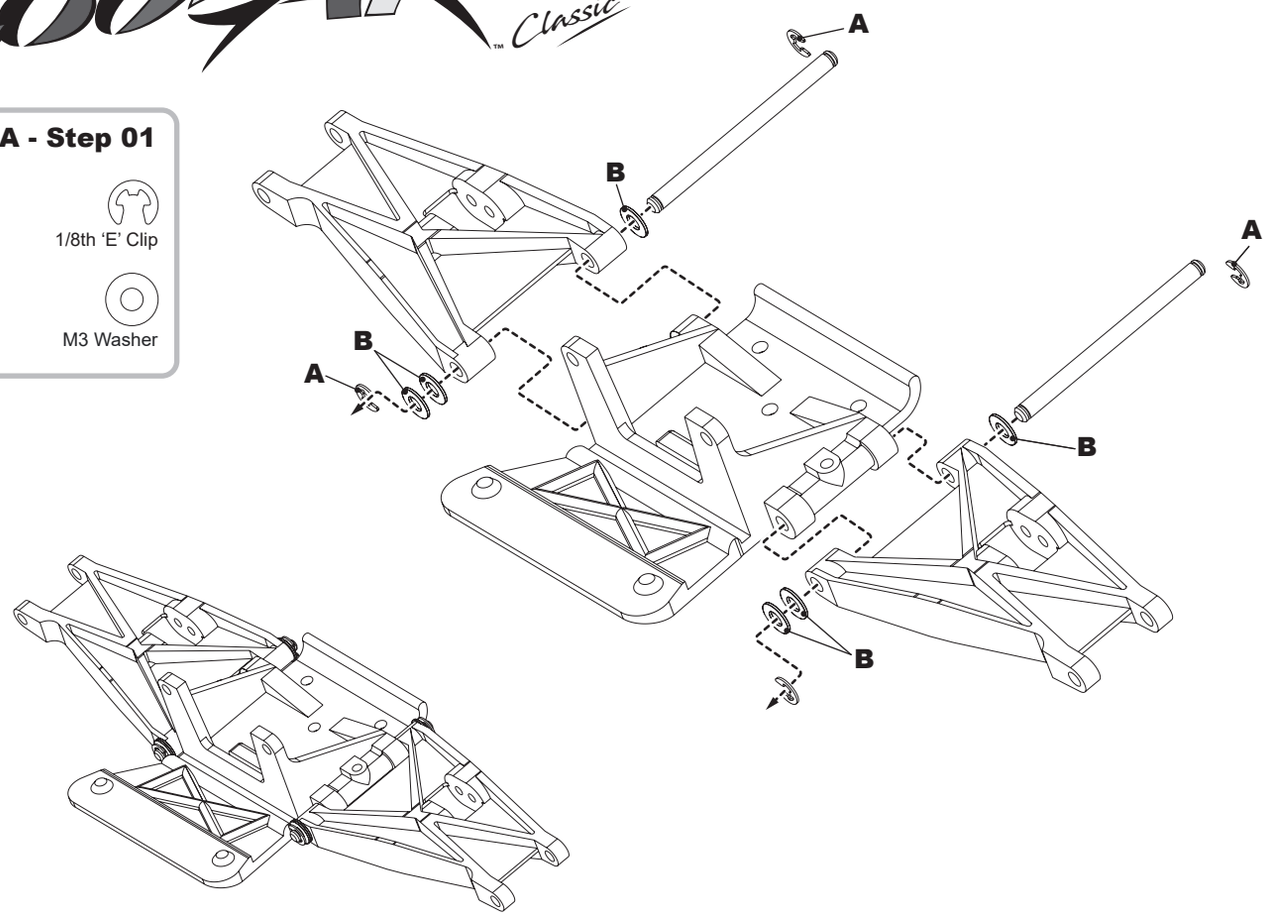

Set up Sheet - Refer to page 36.

www.racing-cars.com

BAG A - Step 01

A x4 — 1/8th 'E' Clip

B x6 — M3 Washer

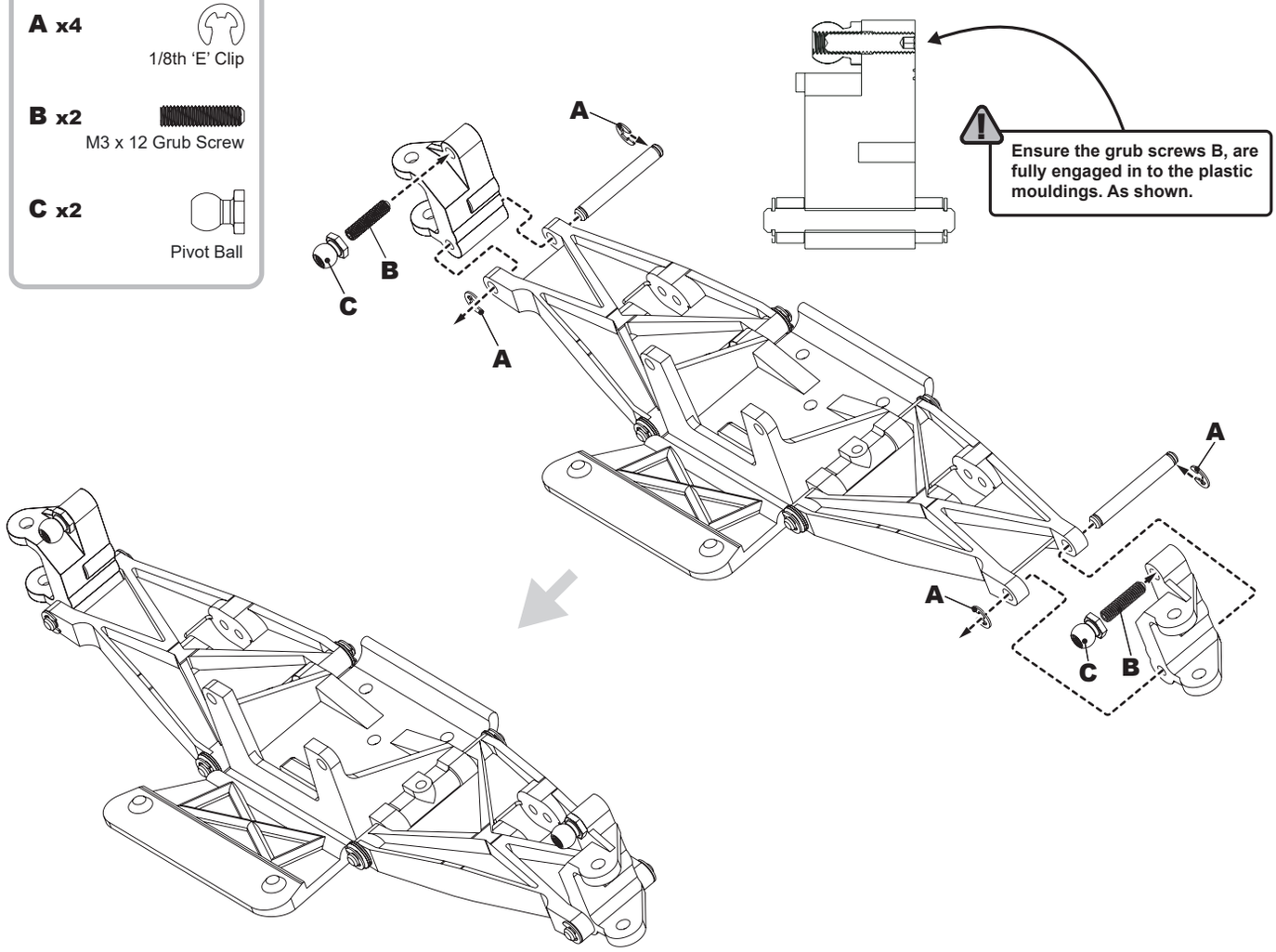


BAG A - Step 02

A x4 — 1/8th 'E' Clip

B x2 — M3 x 12 Grub Screw

C x2 — Pivot Ball



BAG A - Step 03

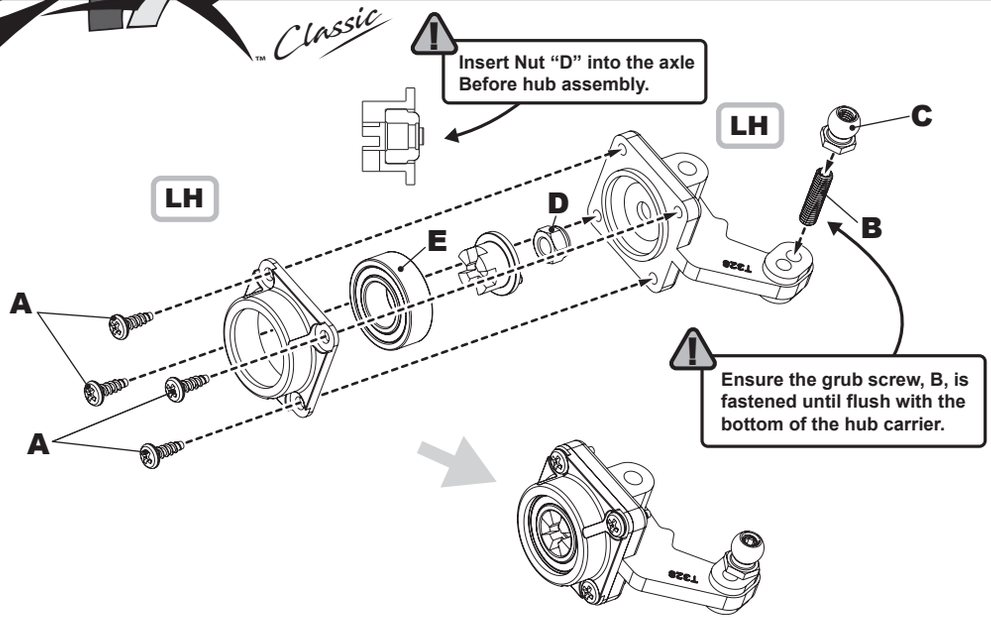
A x4 No2x 1/4" Pan Hd Screw

B x1 M3 x 12 Grub Screw

C x1 Pivot Ball

D x1 M3 Nyloc Nut

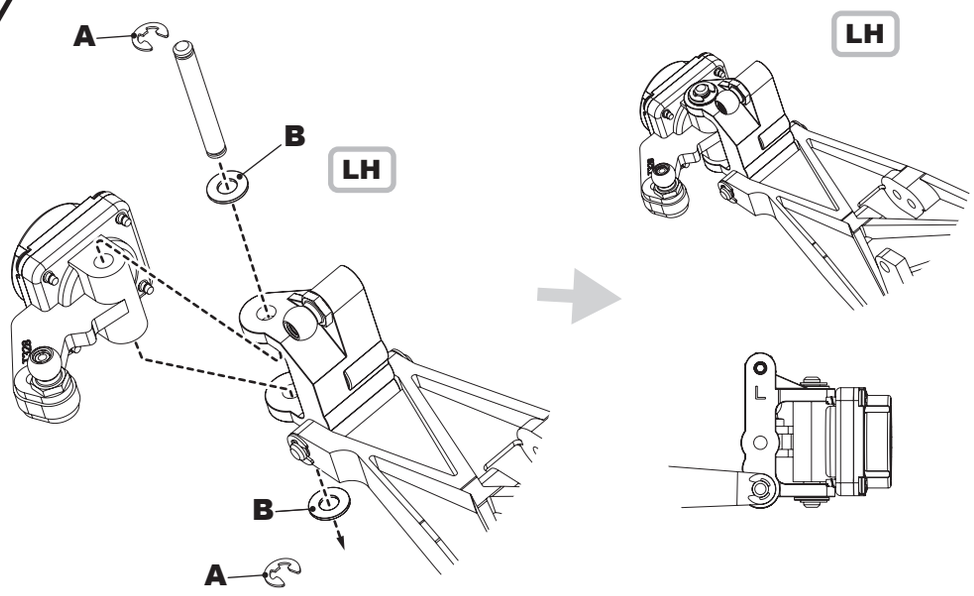
E x1 Ø8 x Ø16 x 5mm Bearing



BAG A - Step 04

A x2 1/8th 'E' Clip

B x2 M3 Washer



BAG A - Step 05

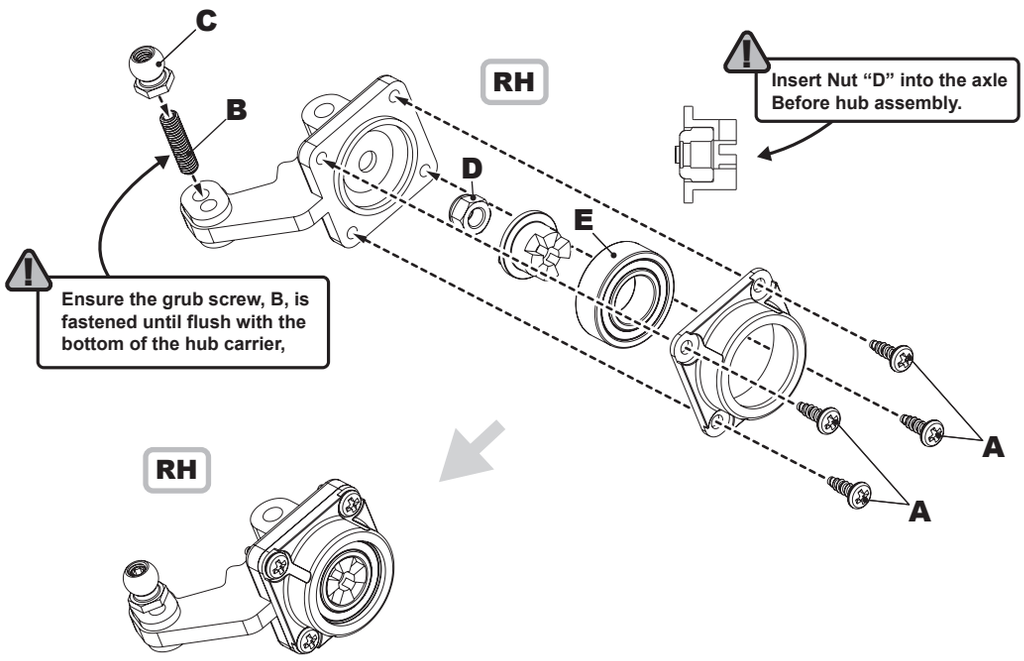
A x4 No2x 1/4" Pan Hd Screw

B x1 M3 x 12 Grub Screw

C x1 Pivot Ball

D x1 M3 Nyloc Nut

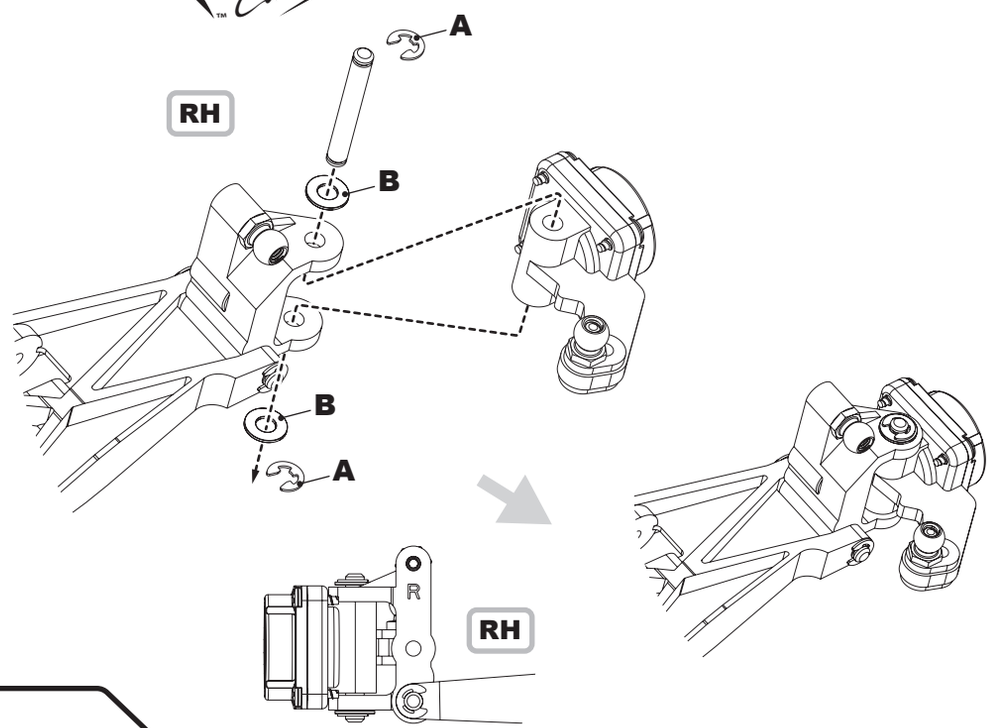
E x1 Ø8 x Ø16 x 5mm Bearing



BAG A - Step 06

A x2 1/8th 'E' Clip

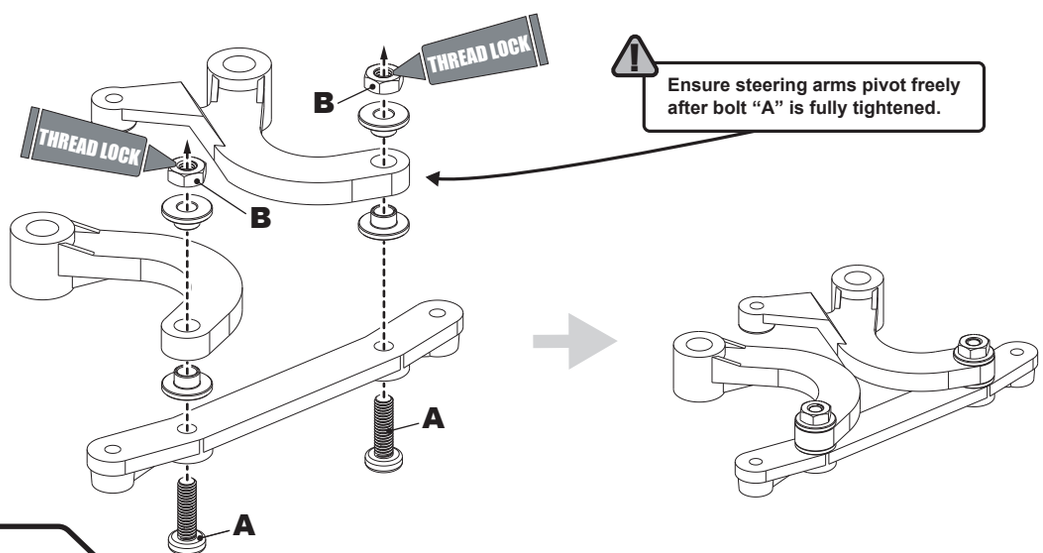
B x2 M3 Washer



BAG A - Step 07

A x2 M3 x 10 Pan Hd Screw

B x2 M3 Steel Nut

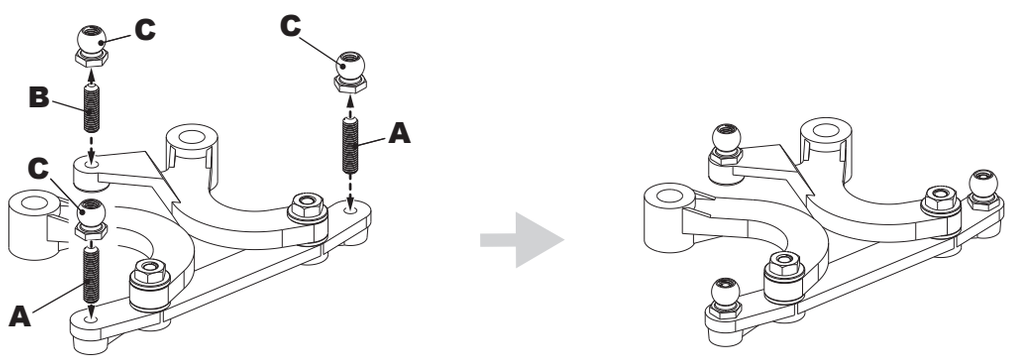


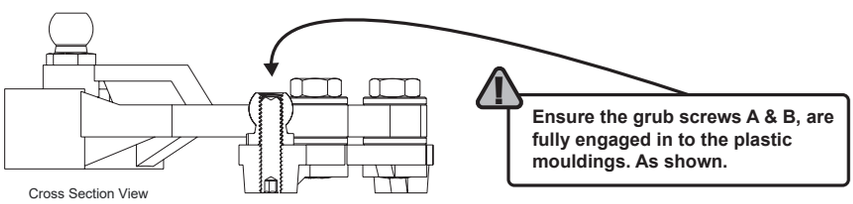
BAG A - Step 08

A x2 M3 x 12 Grub Screw

B x1 M3 x 10 Grub Screw

C x3 Pivot Ball





Cross Section View

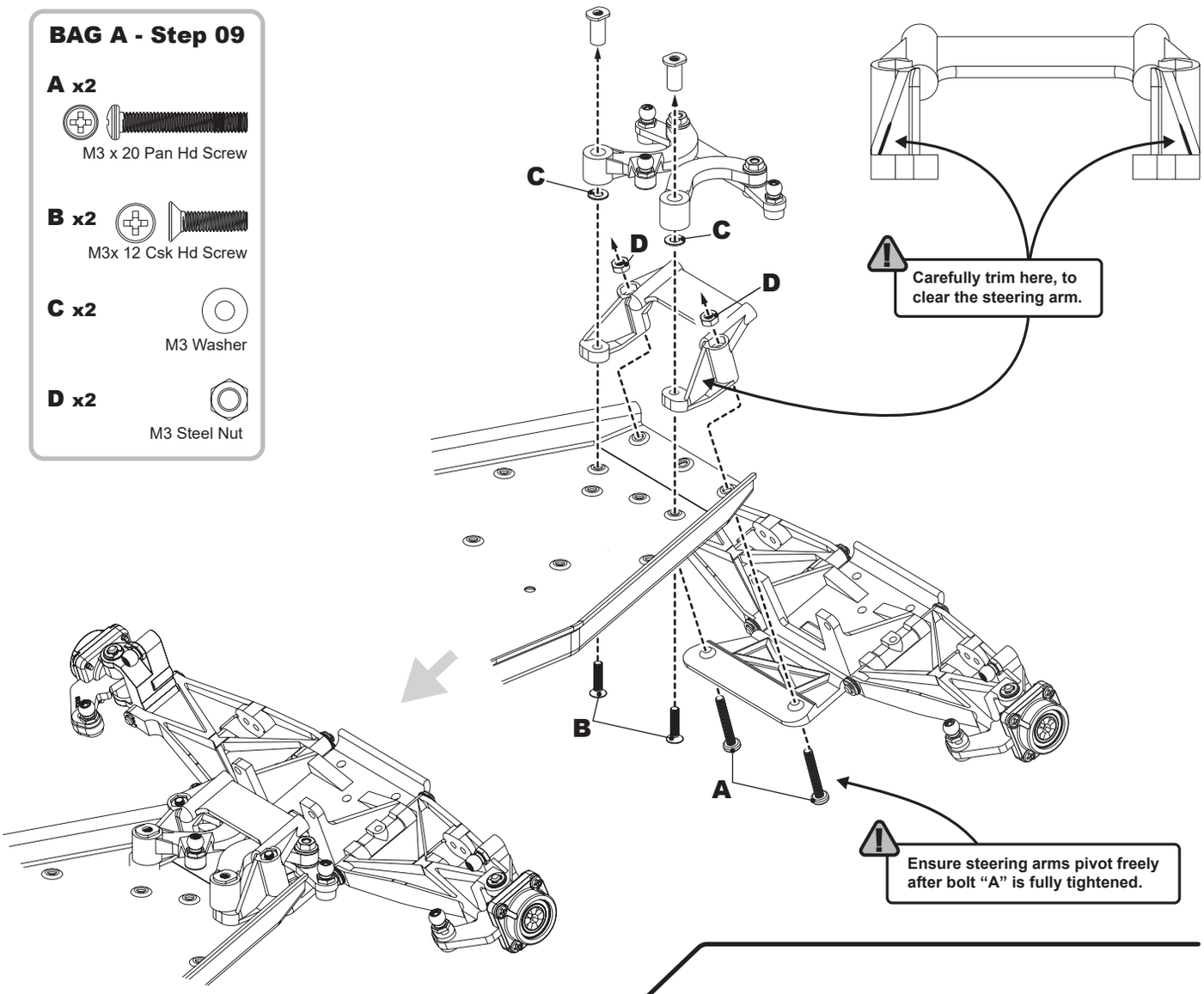
BAG A - Step 09

A x2
M3 x 20 Pan Hd Screw

B x2
M3x 12 Csk Hd Screw

C x2
M3 Washer

D x2
M3 Steel Nut



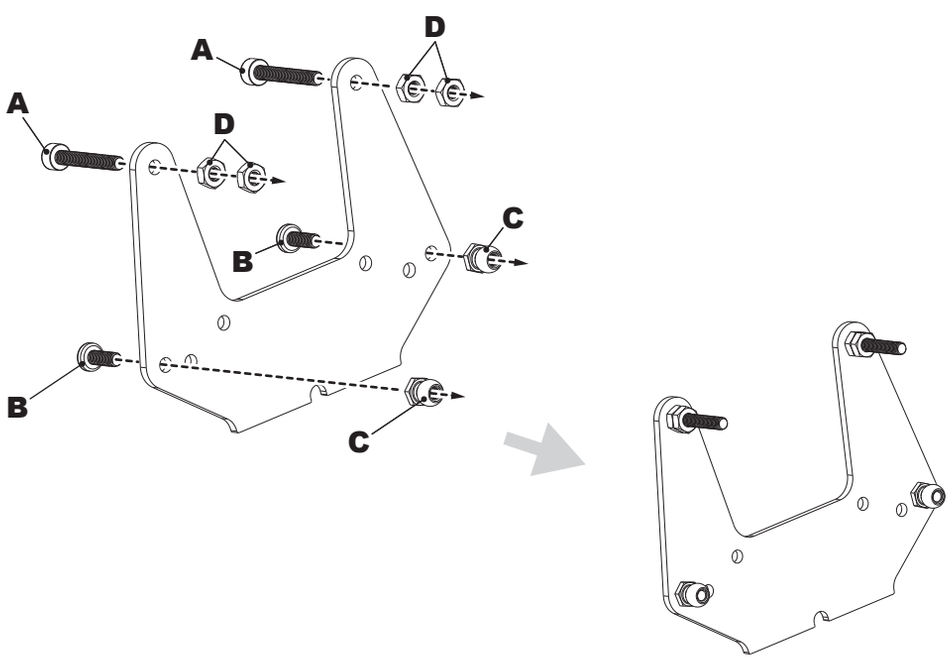
BAG A - Step 10a

A x2
M3x 20 Cap Hd Screw

B x2
M3 x 8 Pan Hd Screw

C x2
Pivot Ball

D x4
M3 Steel Nut



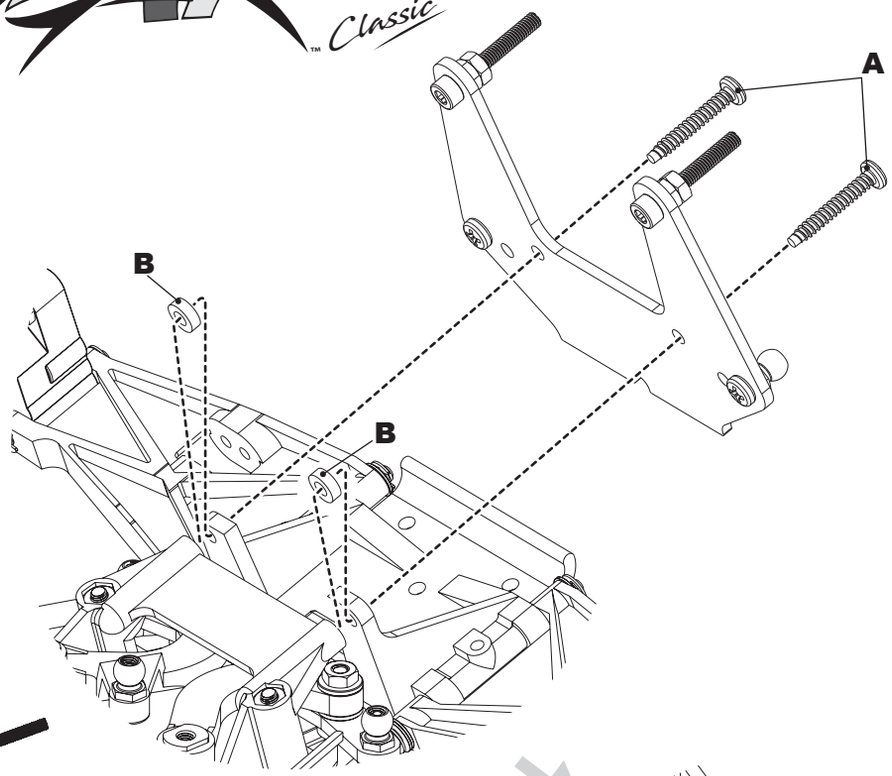
BAG A - Step 10b

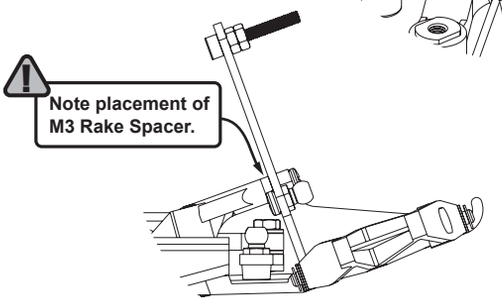
A x2

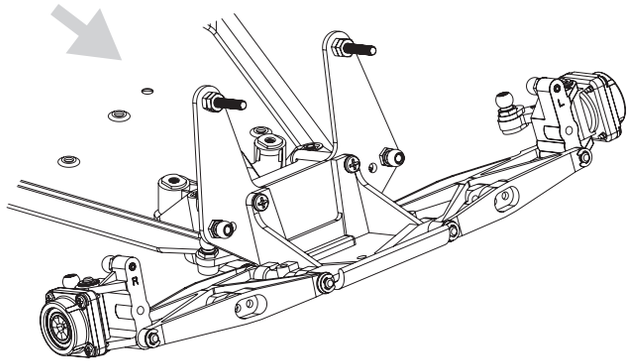
No4x 3/4" Pan Hd Screw

B x2

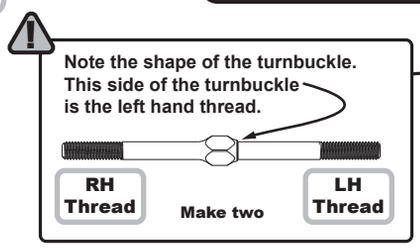
M3 Rake Spacer

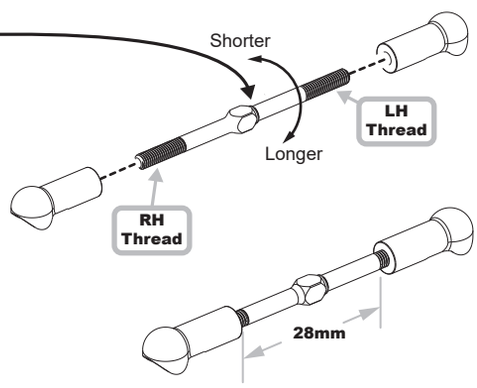


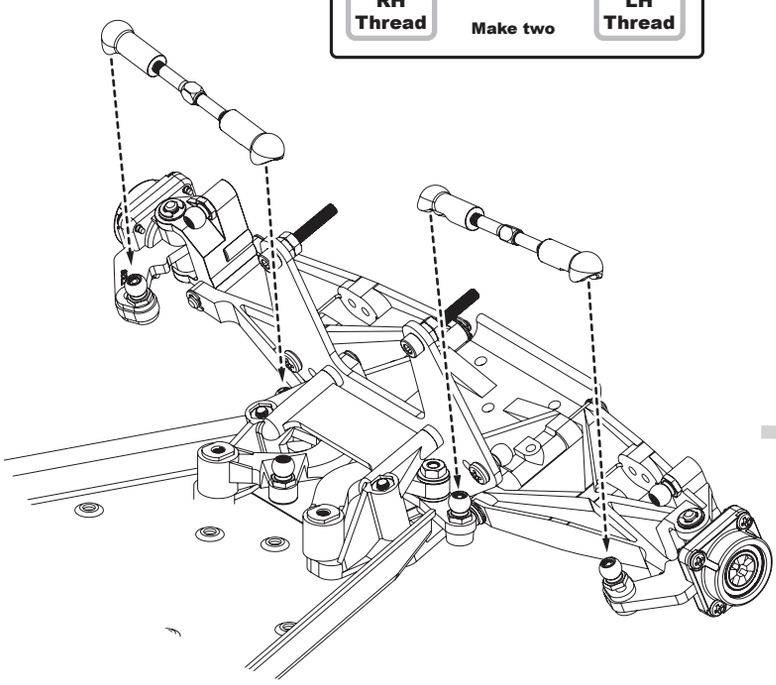


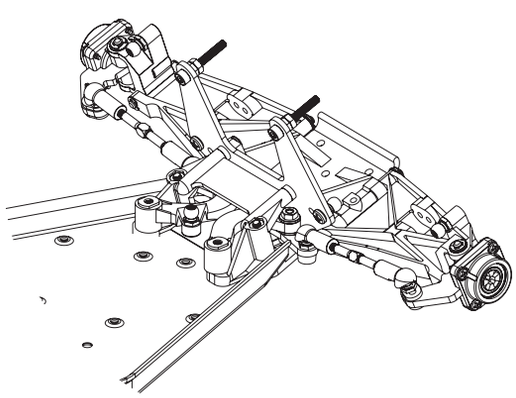


BAG B - Step 11

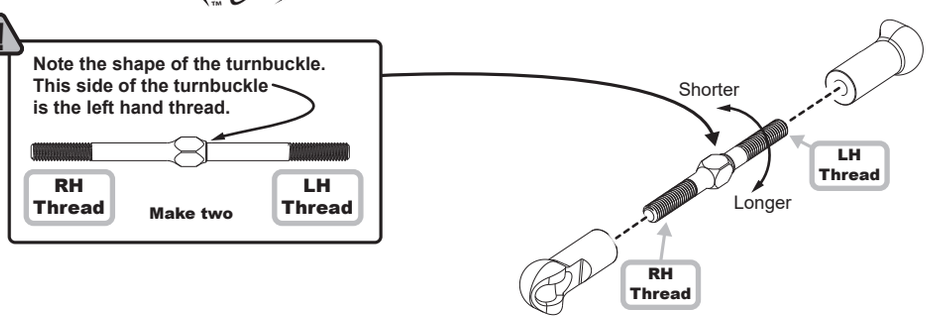


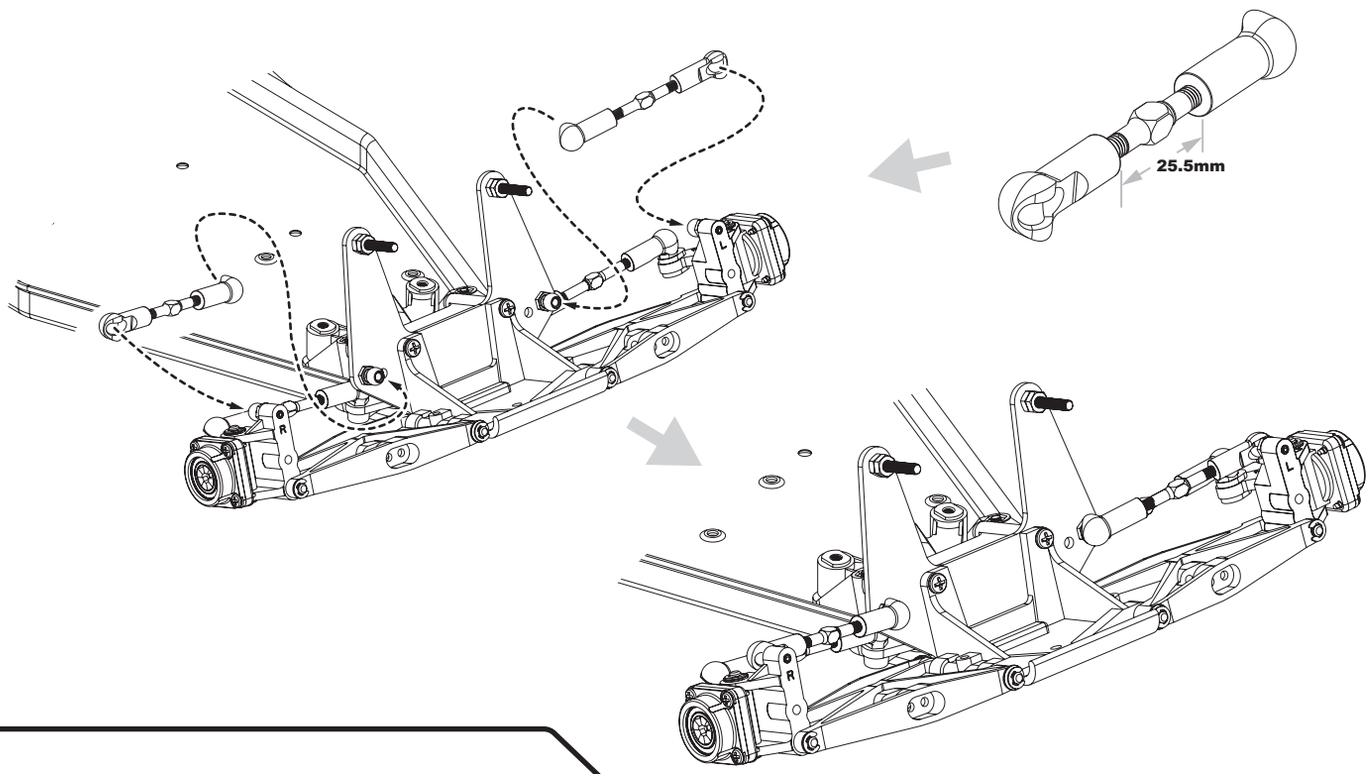






BAG B - Step 12



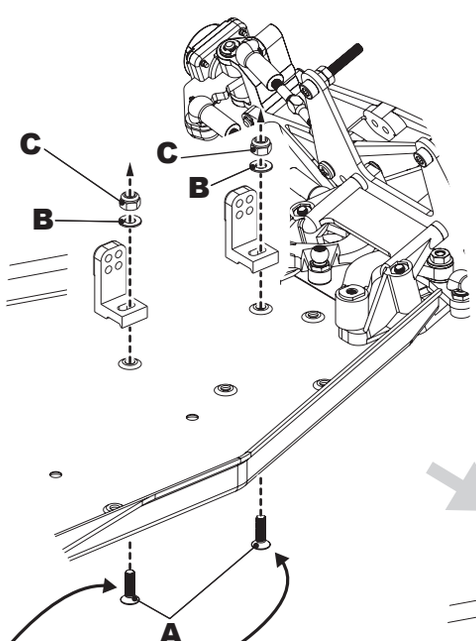


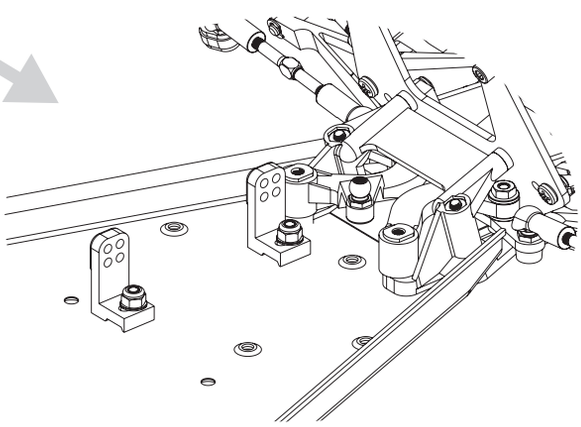
BAG B - Step 13

A x2 — M3x 10 Csk Hd Screw

B x2 — M3 Washer

C x2 — M3 Steel Nyloc Nut





Leave screws, “A” loose for now.
Tighten in Step 14.

BAG B - Step 14

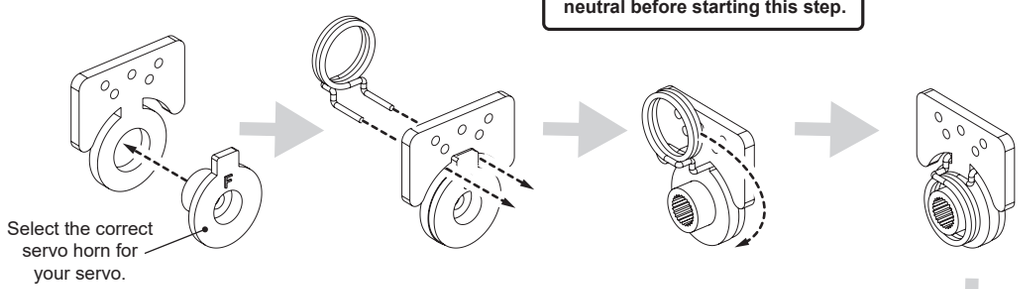
A x1 M3 x 8 Pan Hd Screw

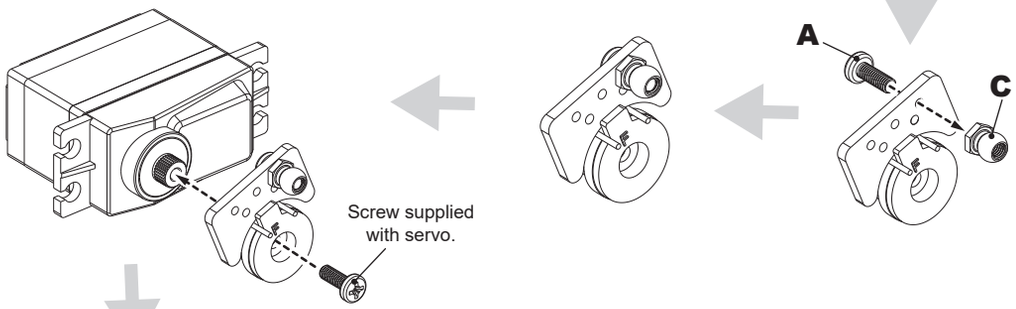
B x2 No4x 3/8" Pan Hd Screw

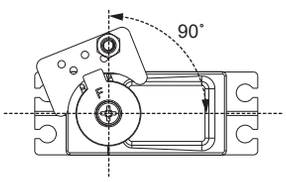
C x1 Pivot Ball

D x2 M3 Washer

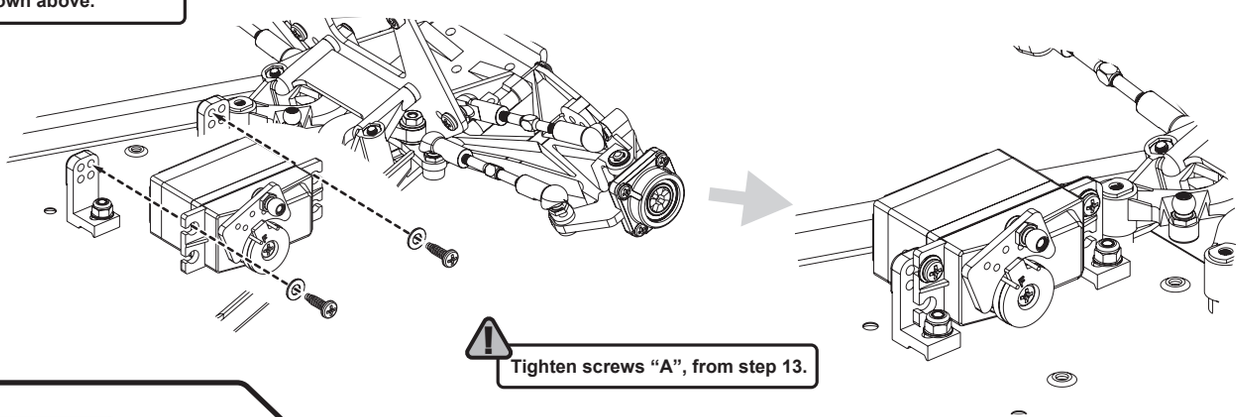
Make sure your servo is set to neutral before starting this step.







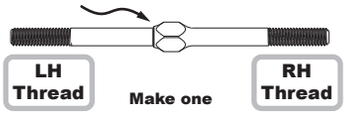
Set steering trim to align servo horn as shown above.

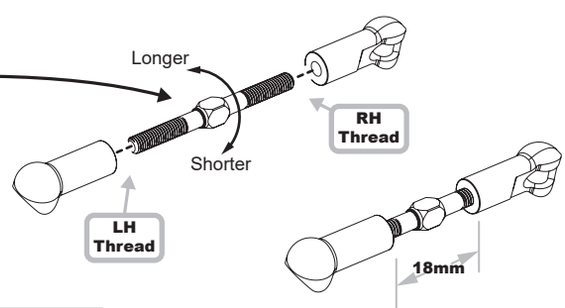


Tighten screws "A", from step 13.

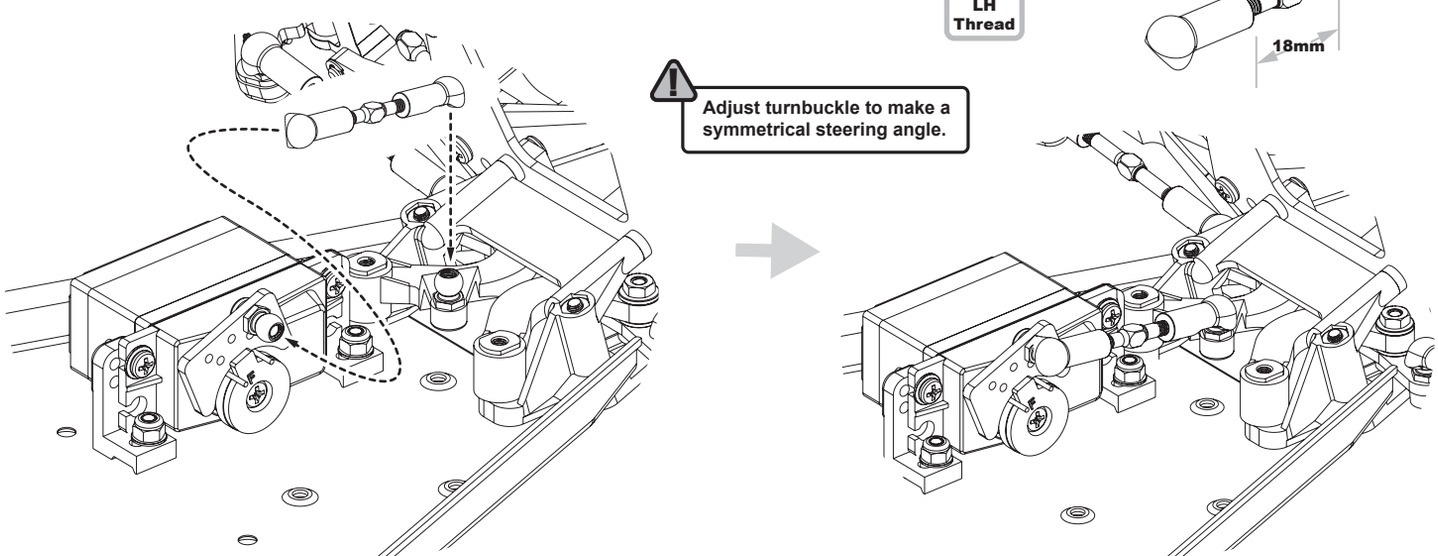
BAG B - Step 15

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





Adjust turnbuckle to make a symmetrical steering angle.



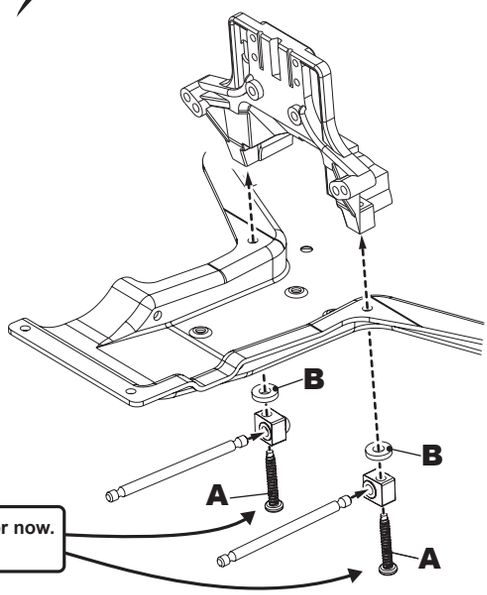
BAG B - Step 16

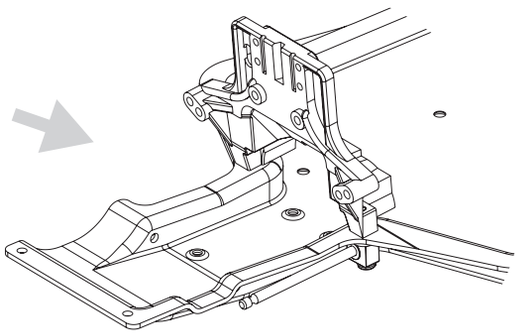
A x2

No4x 3/4" Pan Hd Screw

B x2

Black Nylon Spacer





Leave screws, "A" loose for now. Tighten in Step 18.

BAG B - Step 17

A x1

M3 x 16 Pan Hd Screw

B x1

M3 x 12 Grub Screw

C x1

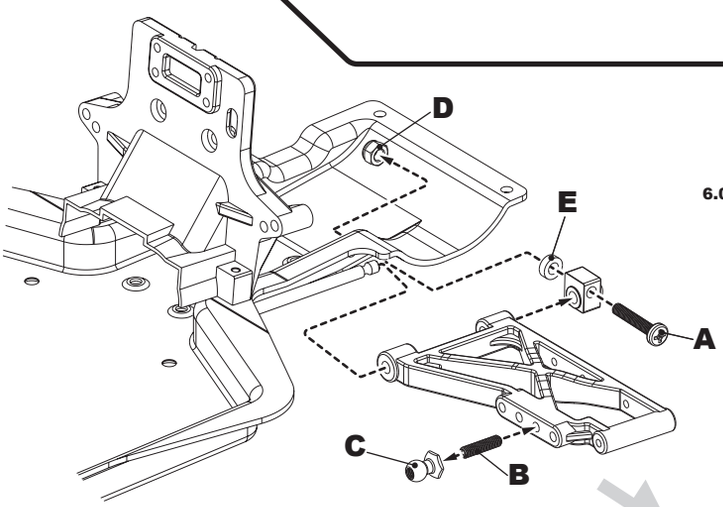
Pivot Ball

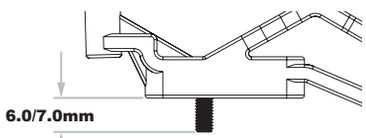
D x1

M3 Nyloc Nut

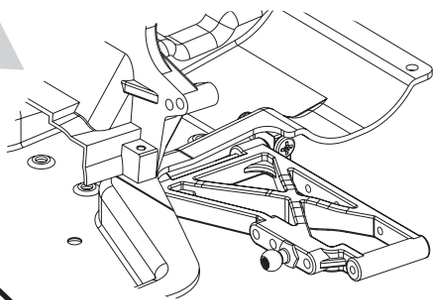
E x1

White Nylon Spacer





Assemble grub screw first, note dimension above. Then tighten the ball to the wishbone.



BAG B - Step 18

A x1

M3 x 16 Pan Hd Screw

B x1

M3 x 12 Grub Screw

C x1

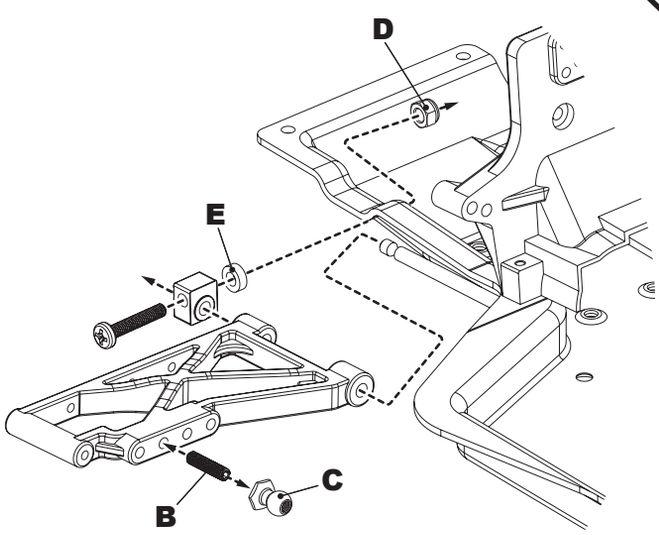
Pivot Ball

D x1

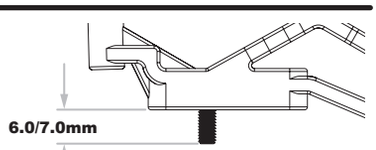
M3 Nyloc Nut

E x1

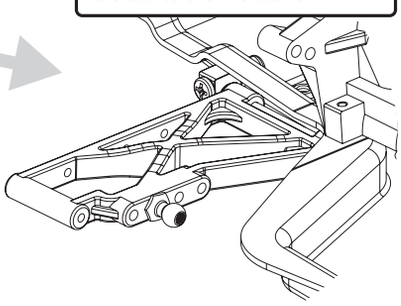
White Nylon Spacer



Tighten screws "A", from step 16.



Assemble grub screw first, note dimension above. Then tighten the ball to the wishbone.

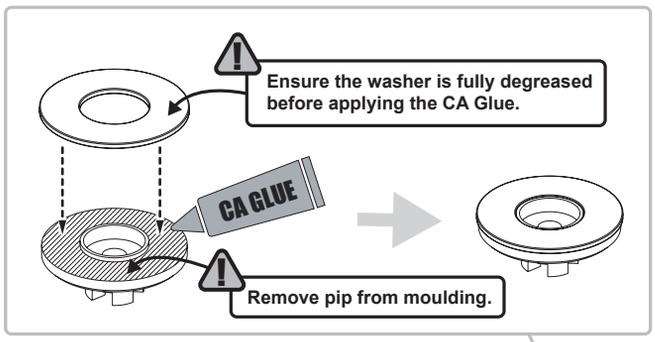


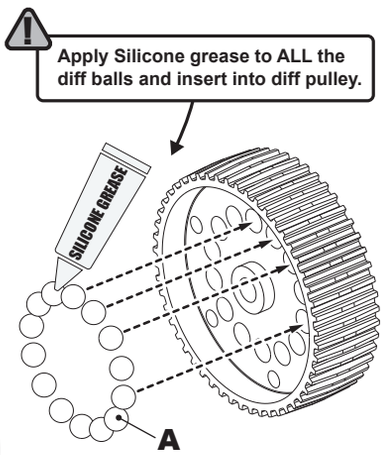
BAG B - Step 19

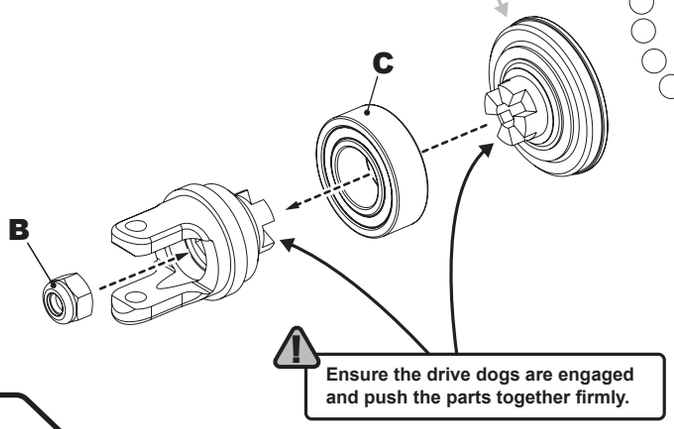
A x14
3mm Diff Ball

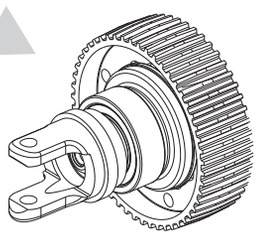
B x1
M3 Nyloc Nut

C x1
Ø8 x Ø16 x 5mm Bearing





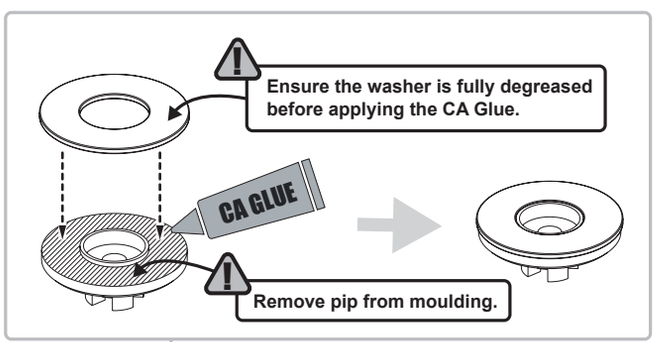


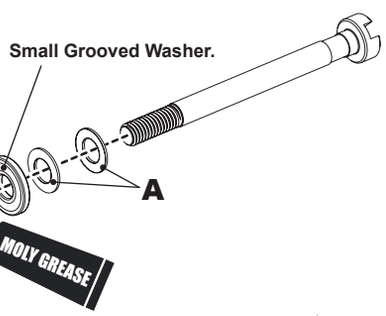


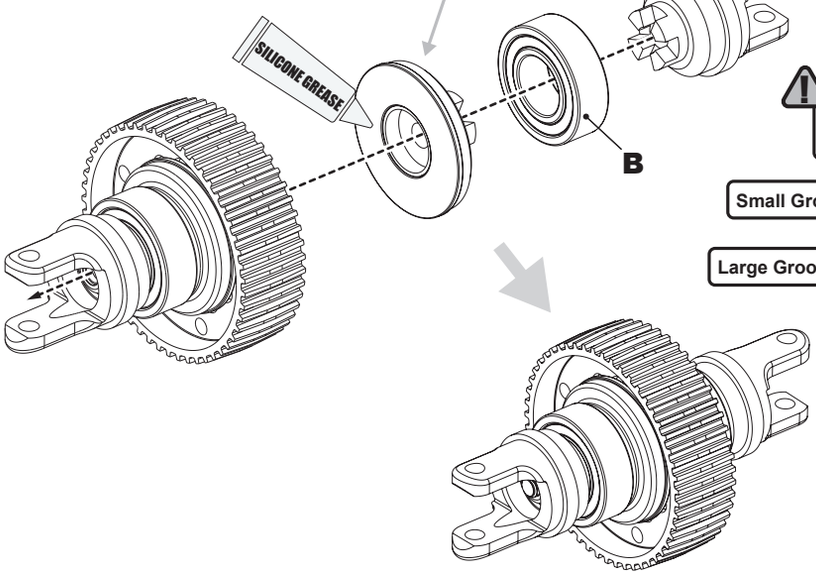
BAG B - Step 20

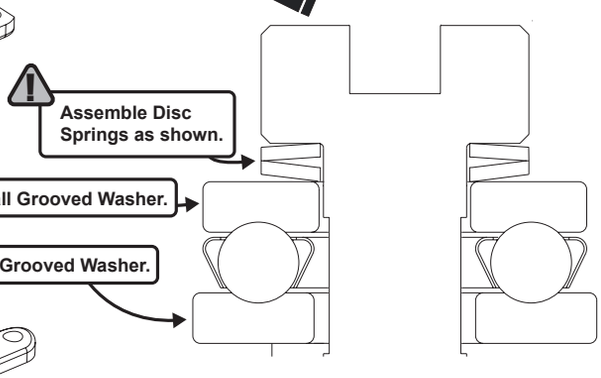
A x2
Disc spring 6.0x3.2x0.3

B x1
Ø8 x Ø16 x 5mm Bearing





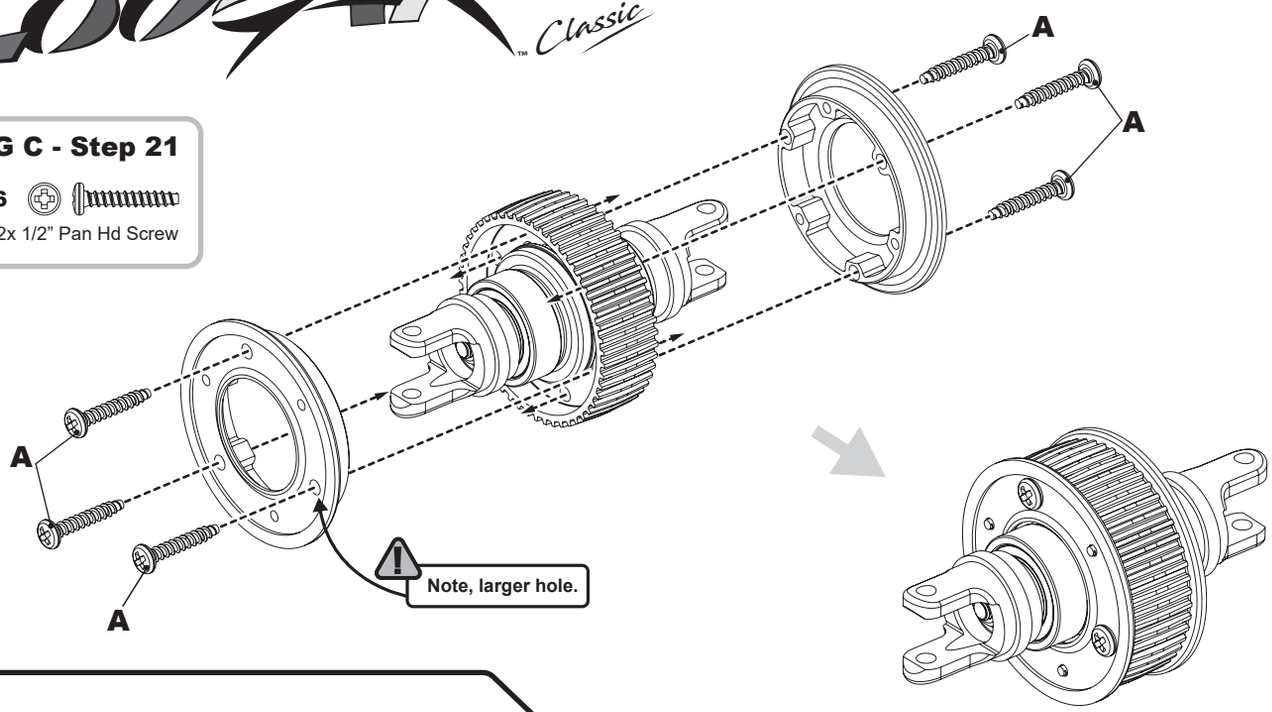




BAG C - Step 21

A x6

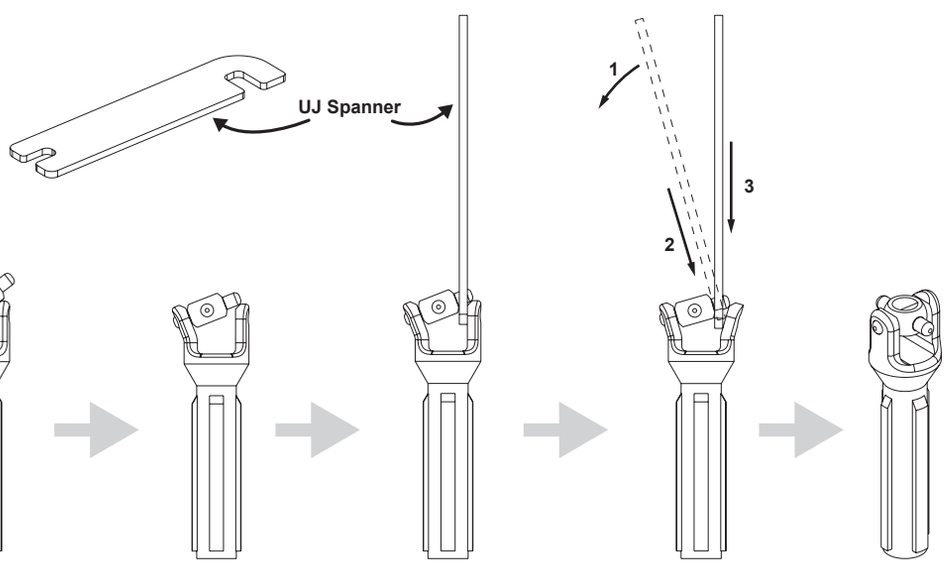
No2x 1/2" Pan Hd Screw



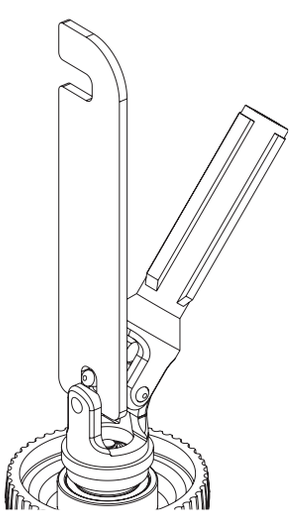
BAG C - Step 22a

Make Two Pieces

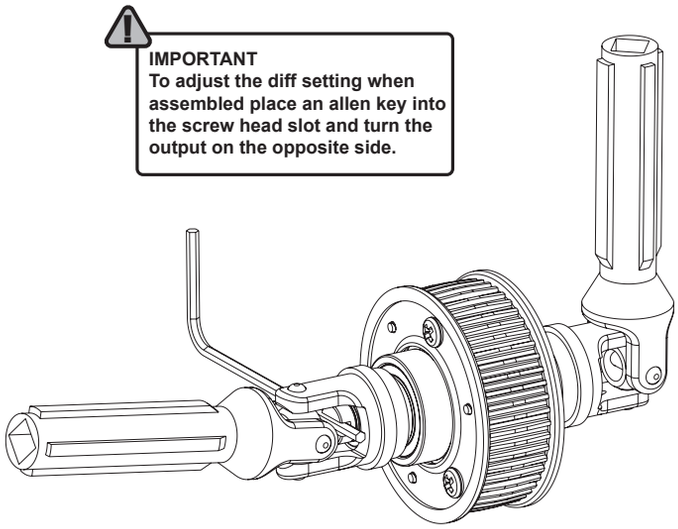
IMPORTANT
The sequence of drawings below shows the assembly procedure of all universal joints, driveshafts, axles and diff outputs.
Warming the plastic parts will help make the assembly easier.



BAG C - Step 22b



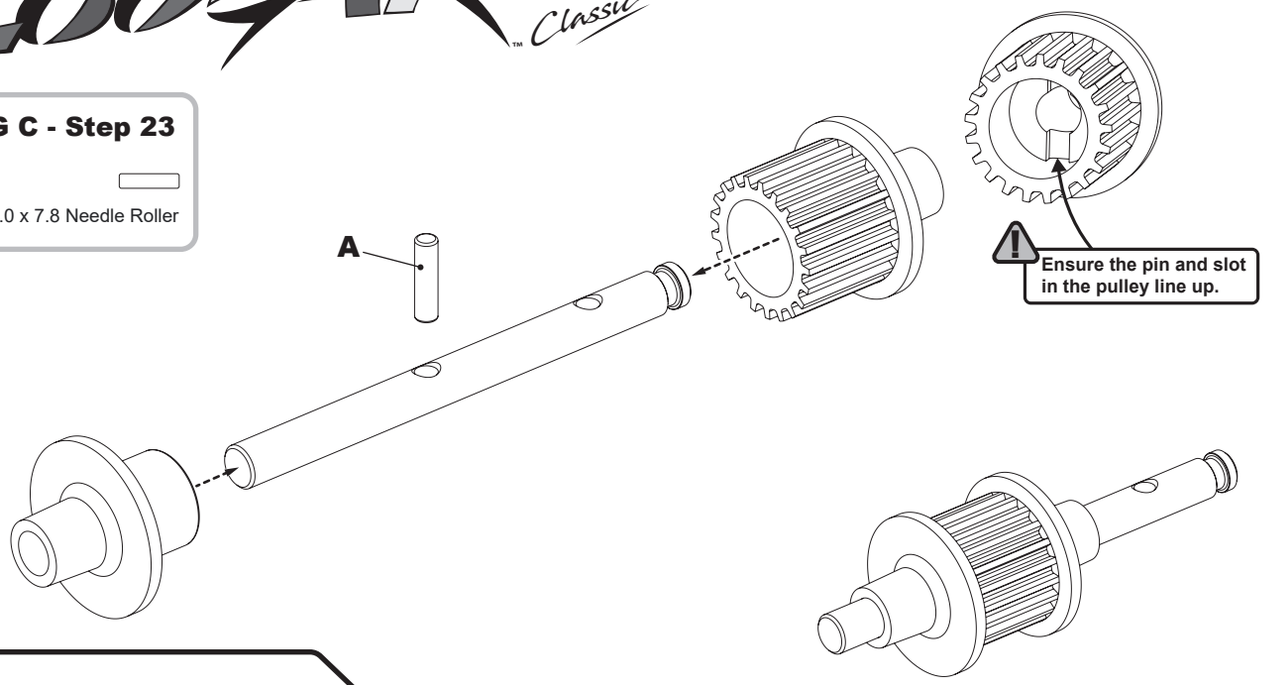
IMPORTANT
To adjust the diff setting when assembled place an allen key into the screw head slot and turn the output on the opposite side.



BAG C - Step 23

A x1

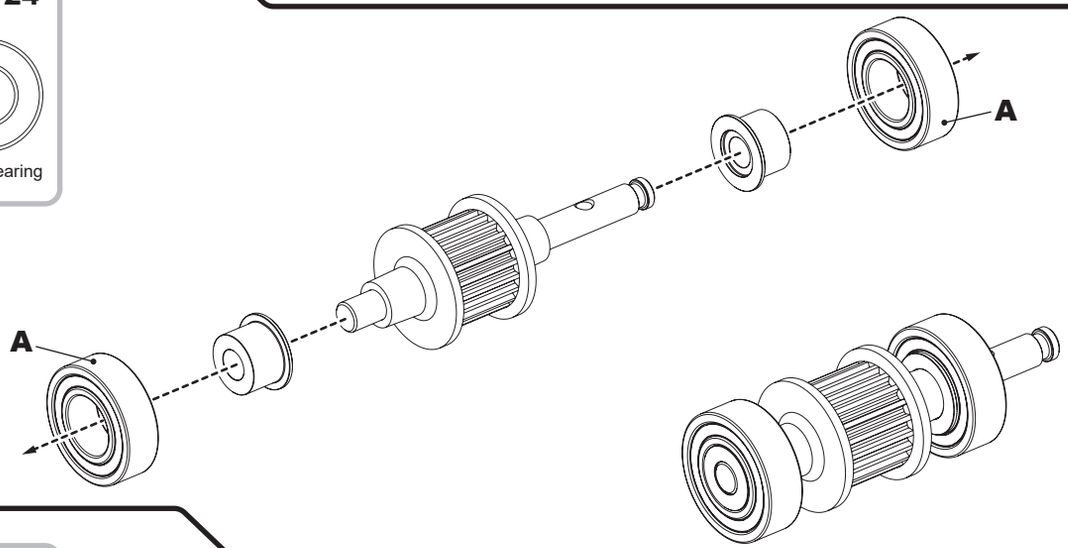
ø2.0 x 7.8 Needle Roller



BAG C - Step 24

A x2

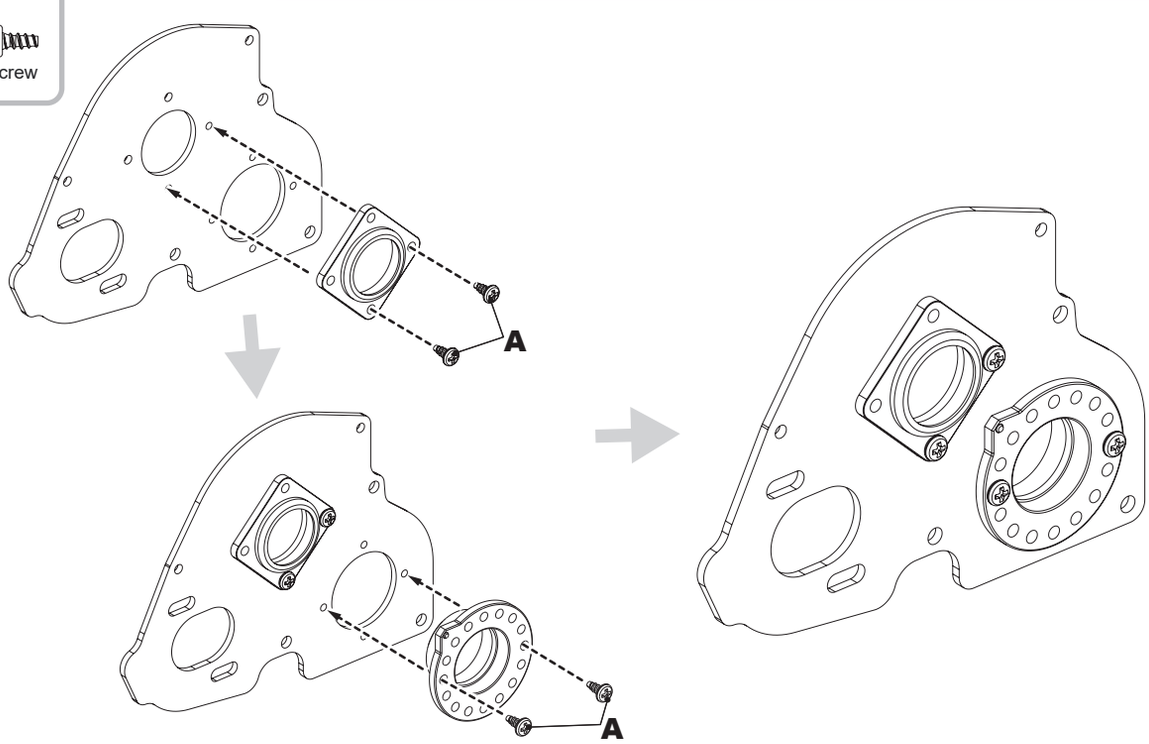
Ø8 x Ø16 x 5mm Bearing



BAG C - Step 25

A x4

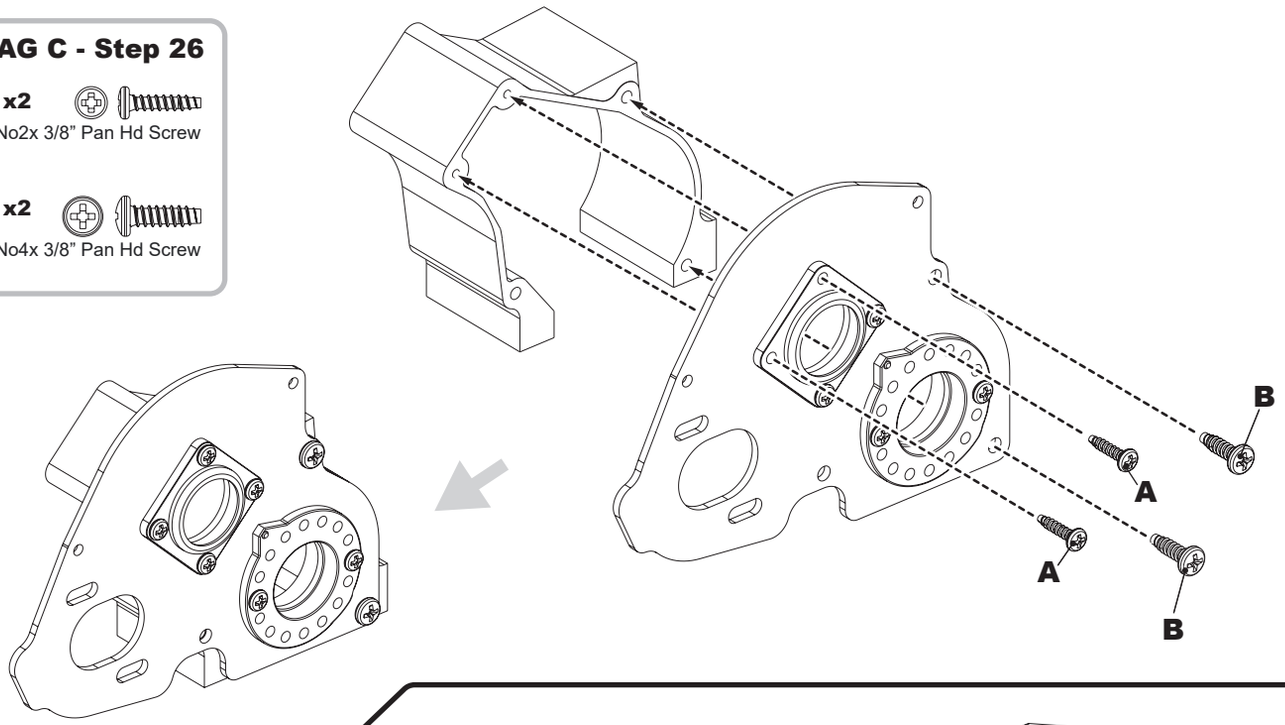
No2x 3/16" Pan Hd Screw



BAG C - Step 26

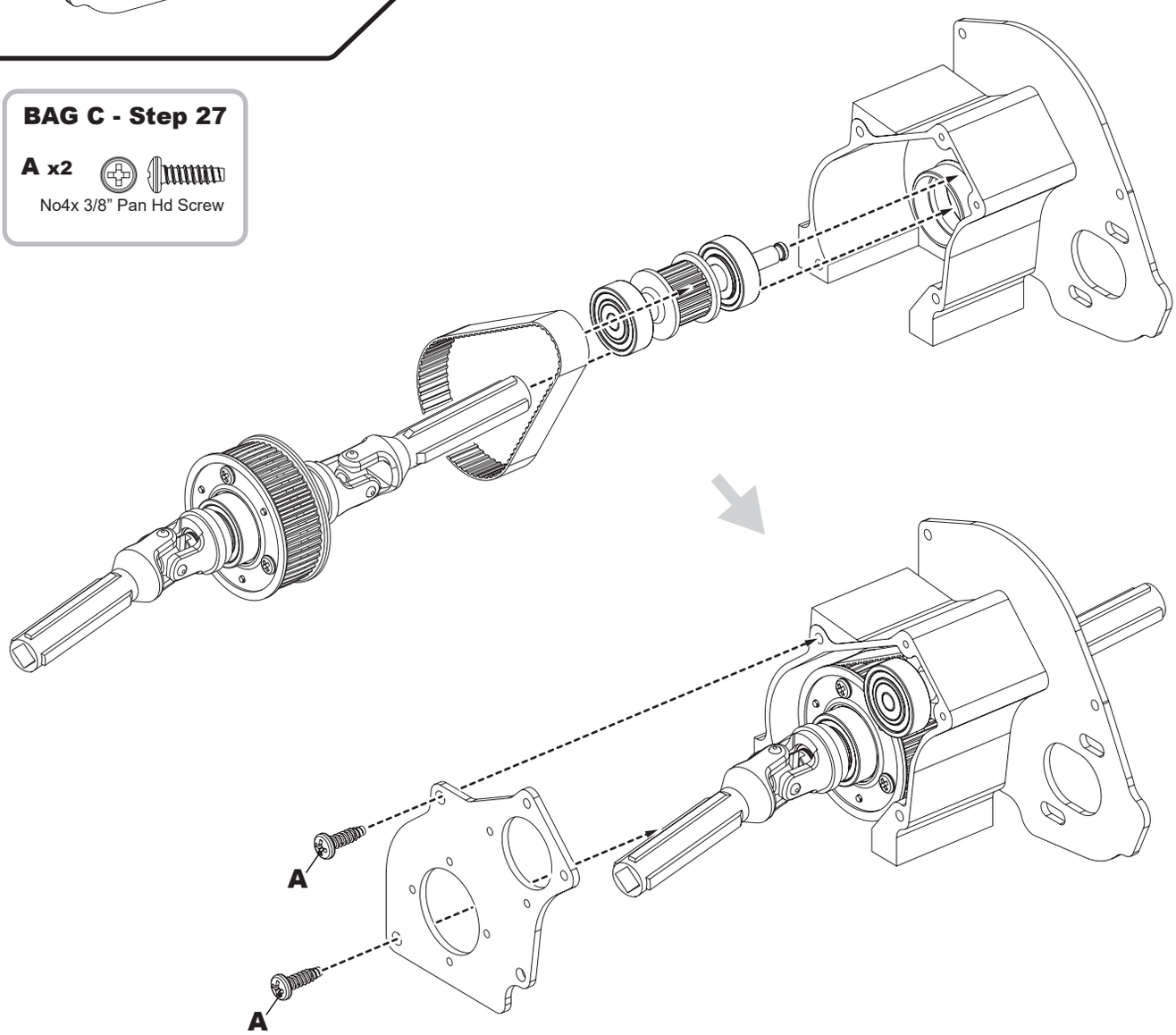
A x2
No2x 3/8" Pan Hd Screw

B x2
No4x 3/8" Pan Hd Screw



BAG C - Step 27

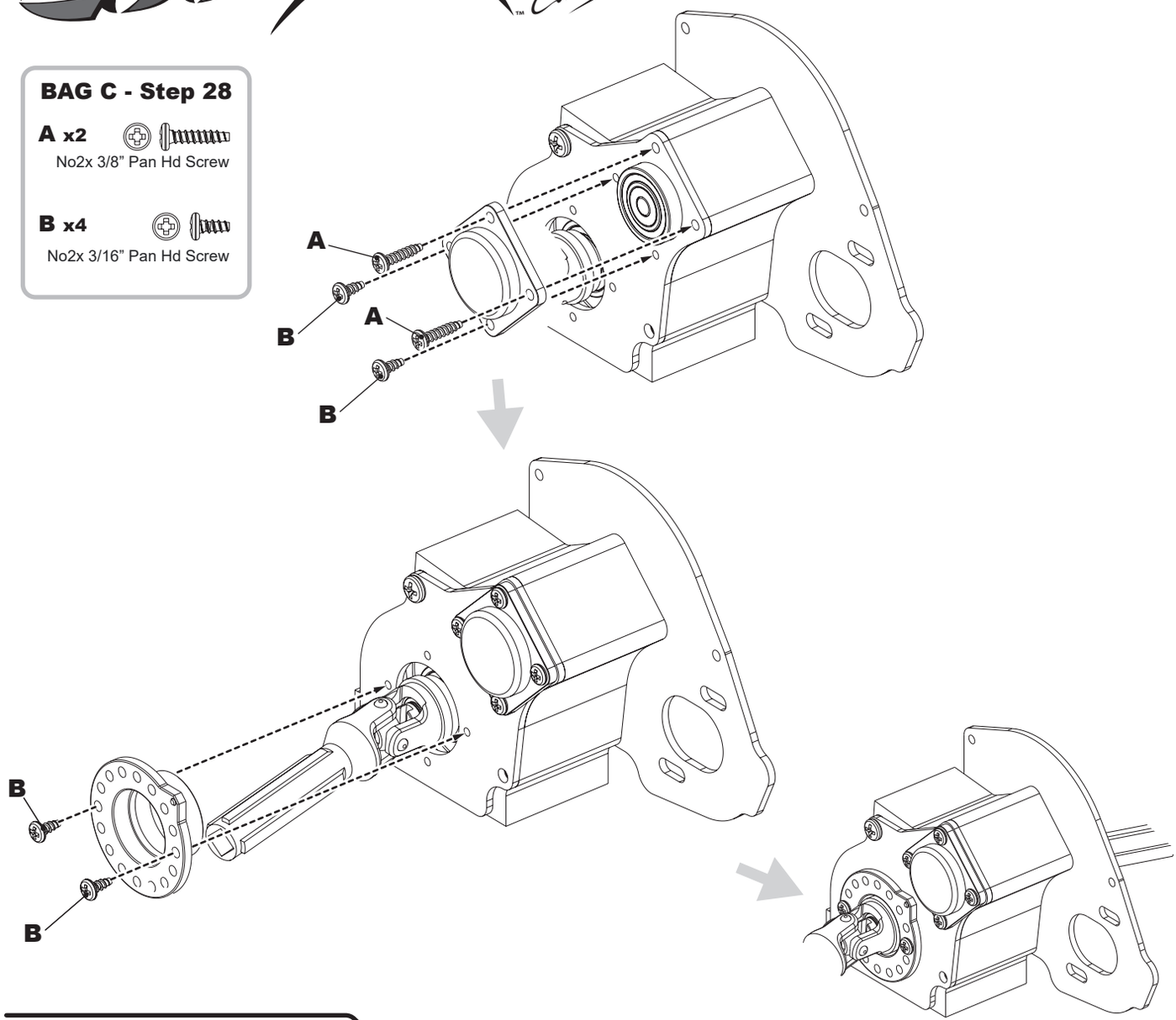
A x2
No4x 3/8" Pan Hd Screw



BAG C - Step 28

A x2
No2x 3/8" Pan Hd Screw

B x4
No2x 3/16" Pan Hd Screw

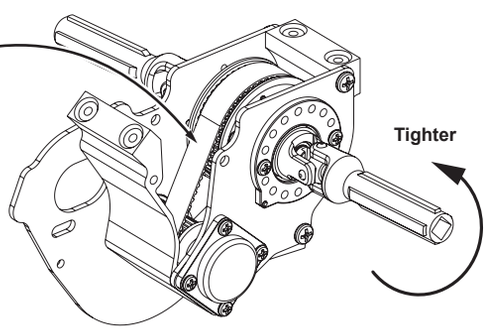


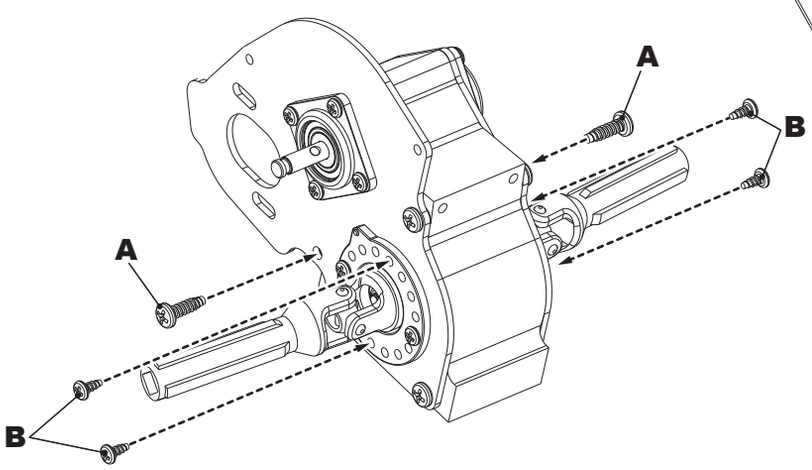
BAG C - Step 29a

A x2
No4x 3/8" Pan Hd Screw

B x4
No2x 3/16" Pan Hd Screw

To set the belt tension pivot the rear casing as shown to gain access to the belt. Turn the eccentrics to adjust the tension of the belt.



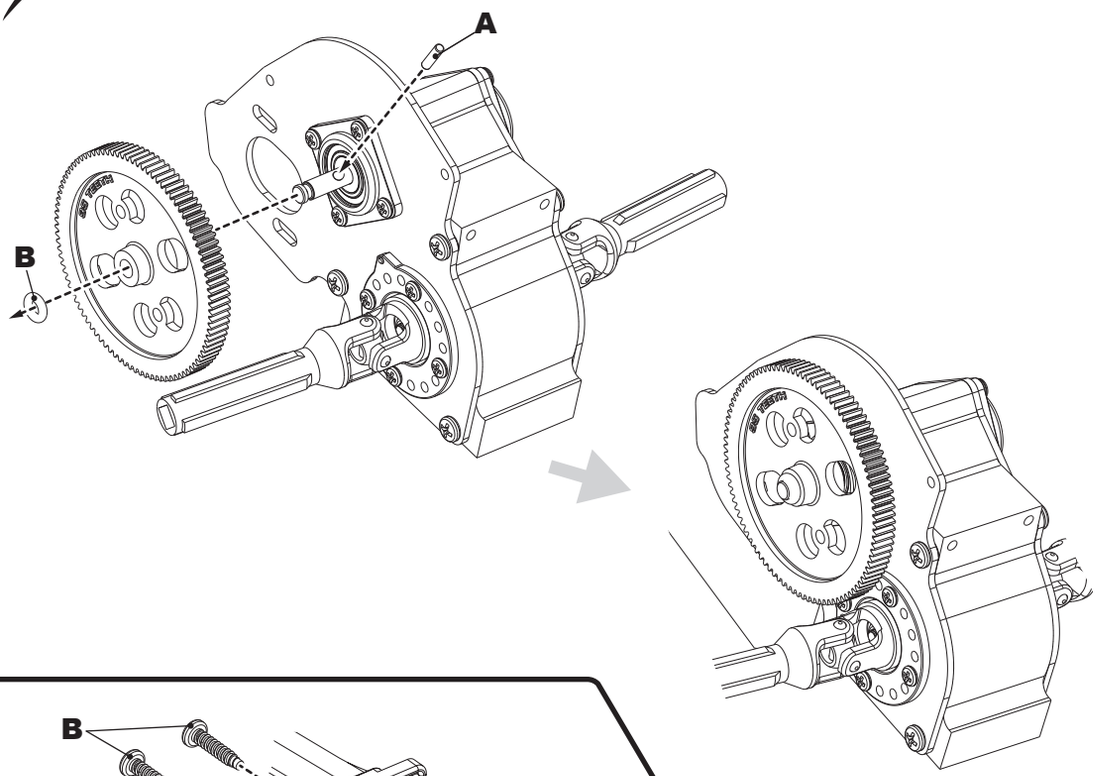


Remove screws and turn both eccentric bearing housings in the direction shown. This will tighten the belt. Ensure both eccentrics are set the same.
The eccentric position shown is in the fully loose position.

BAG C - Step 29b

A x1
ø2.0 x 7.8 Pin

B x1
'O' Ring ø3 x 1.8

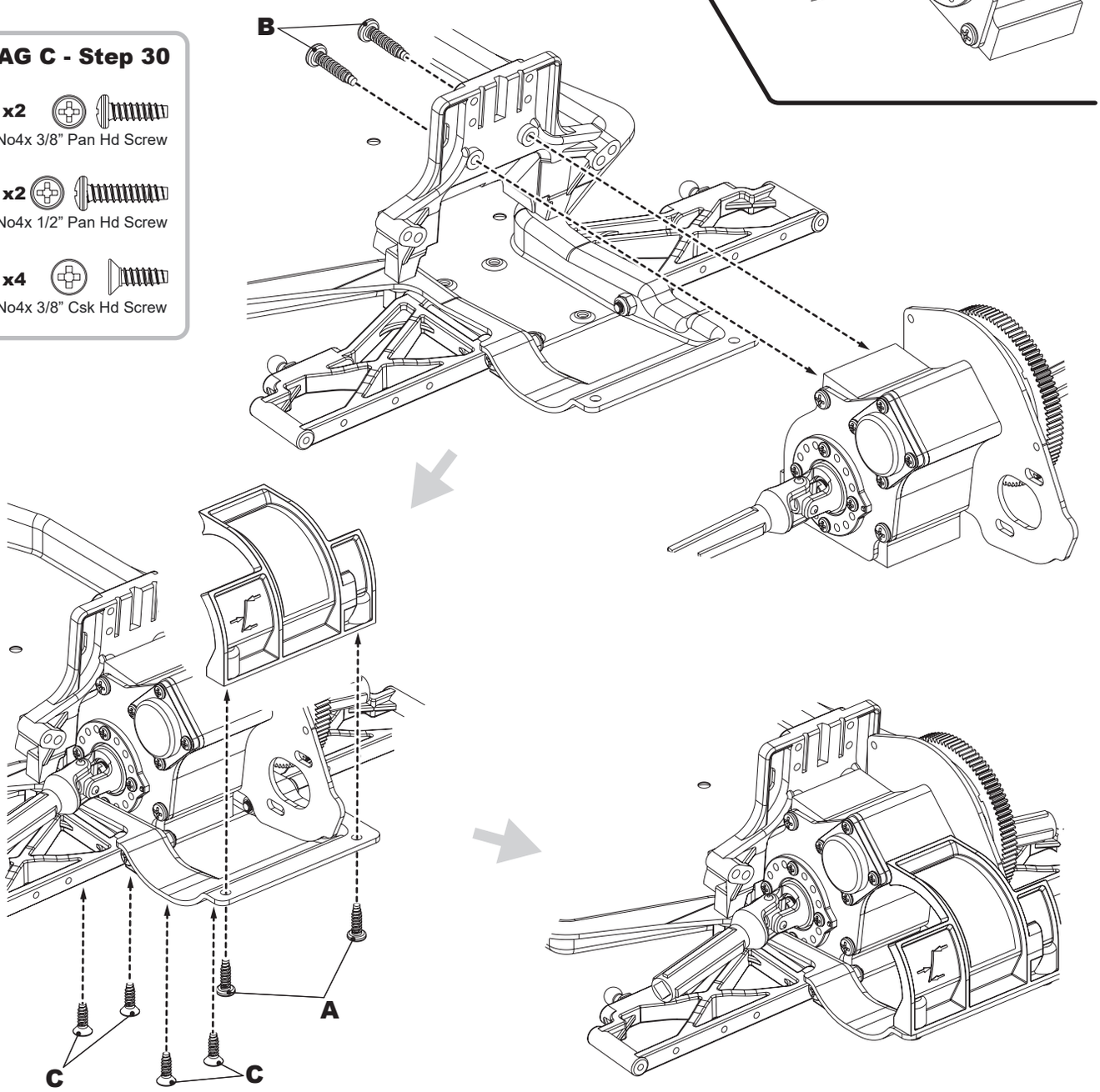


BAG C - Step 30

A x2
No4x 3/8" Pan Hd Screw

B x2
No4x 1/2" Pan Hd Screw

C x4
No4x 3/8" Csk Hd Screw

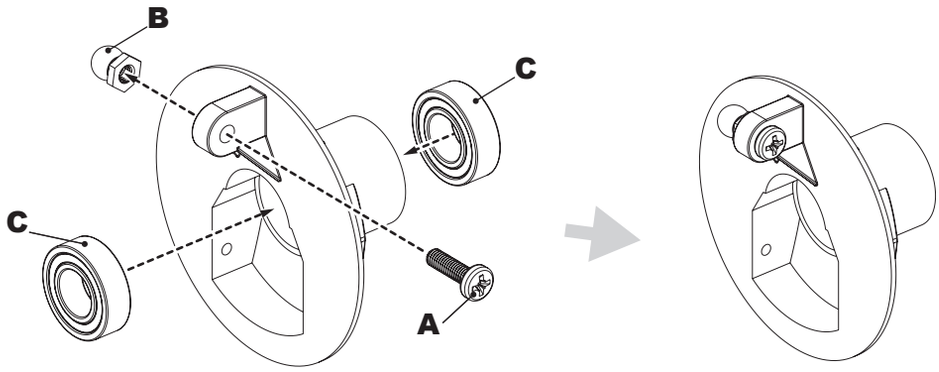


BAG D - Step 31

A x1
M3 x 10 Pan Hd Screw

B x1
Pivot Ball

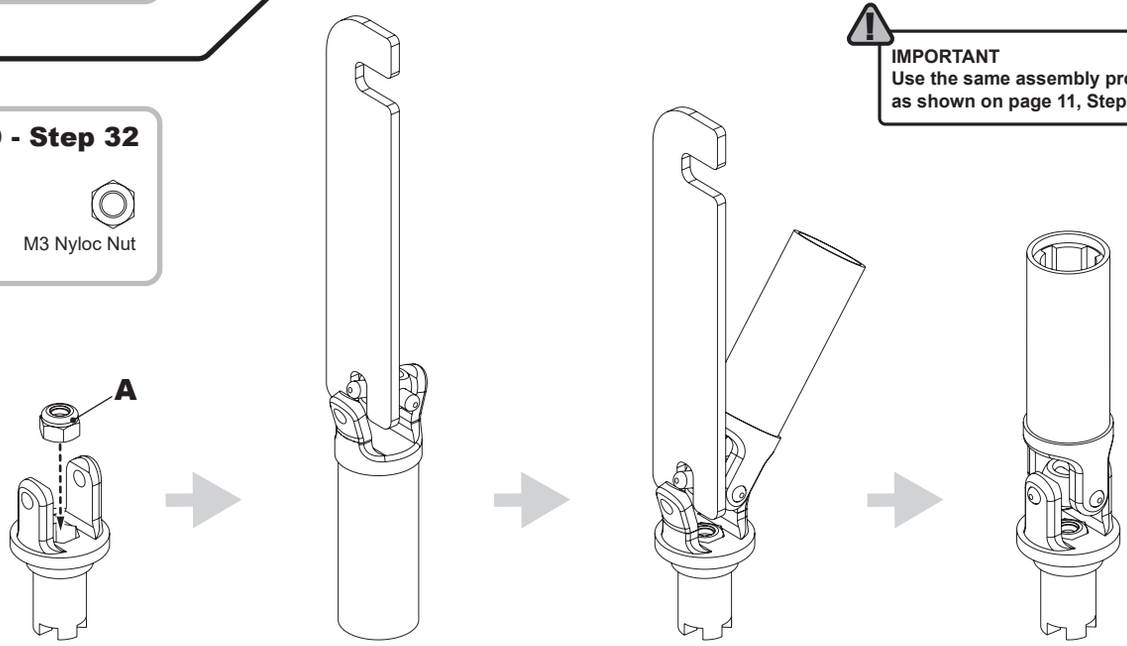
C x2
Ø8 x Ø16 x 5mm Bearing

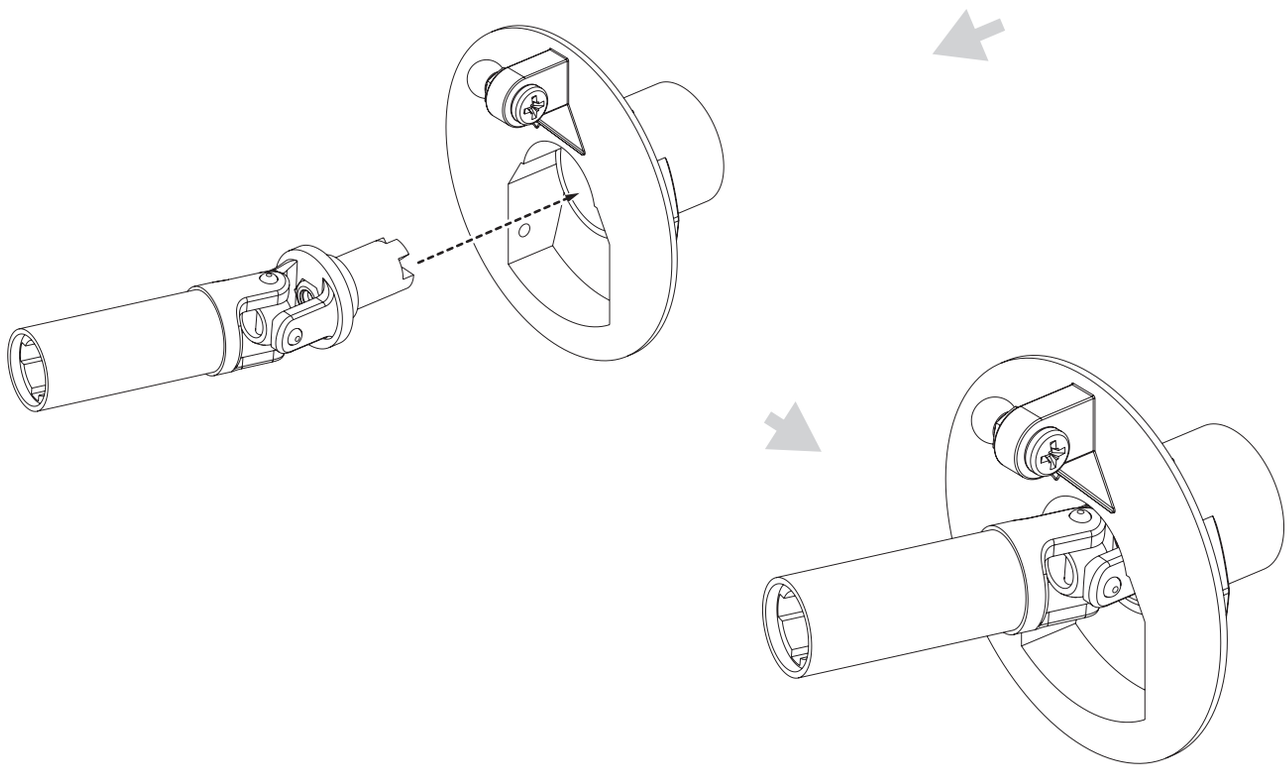


IMPORTANT
Use the same assembly procedure as shown on page 11, Step 22a.

BAG D - Step 32

A x1
M3 Nyloc Nut





BAG D - Step 33

A x1

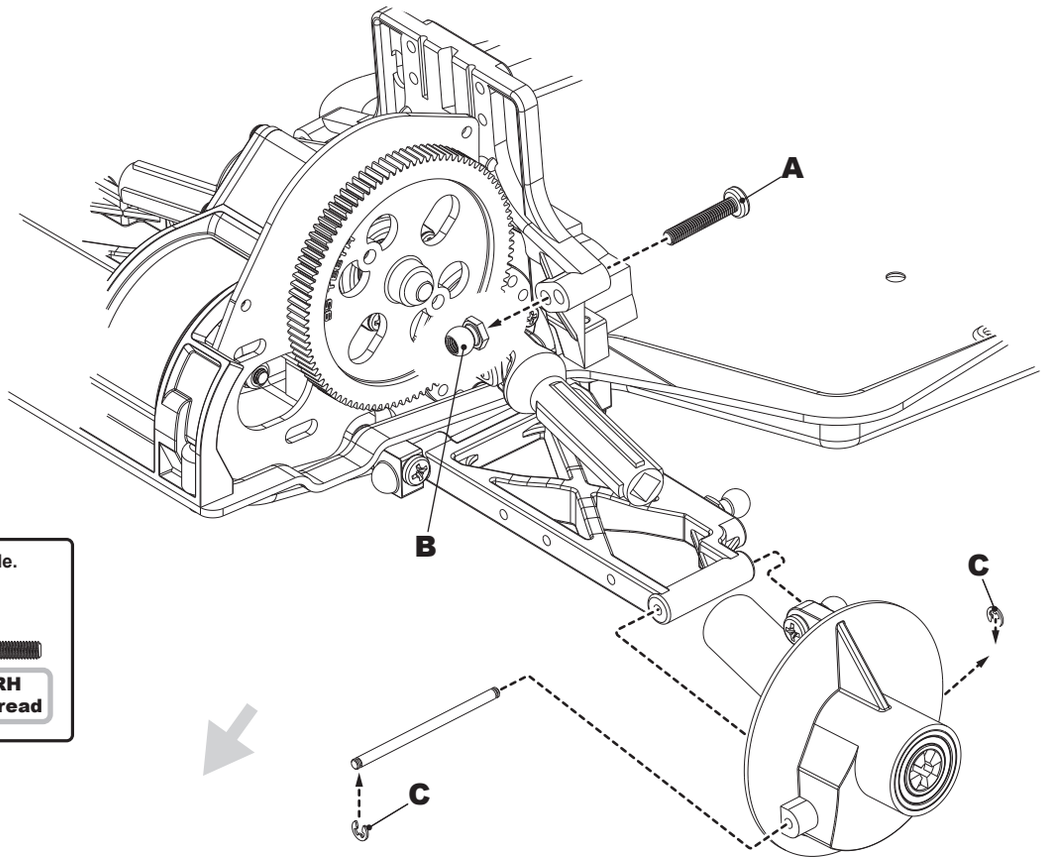
M3 x 16 Pan Hd Screw

B x1

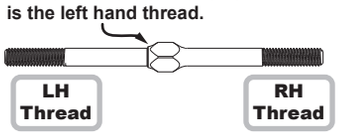
Pivot Ball

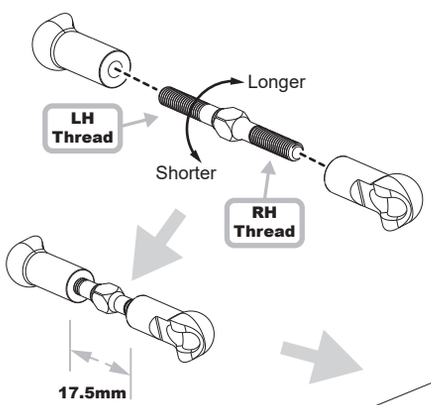
C x2

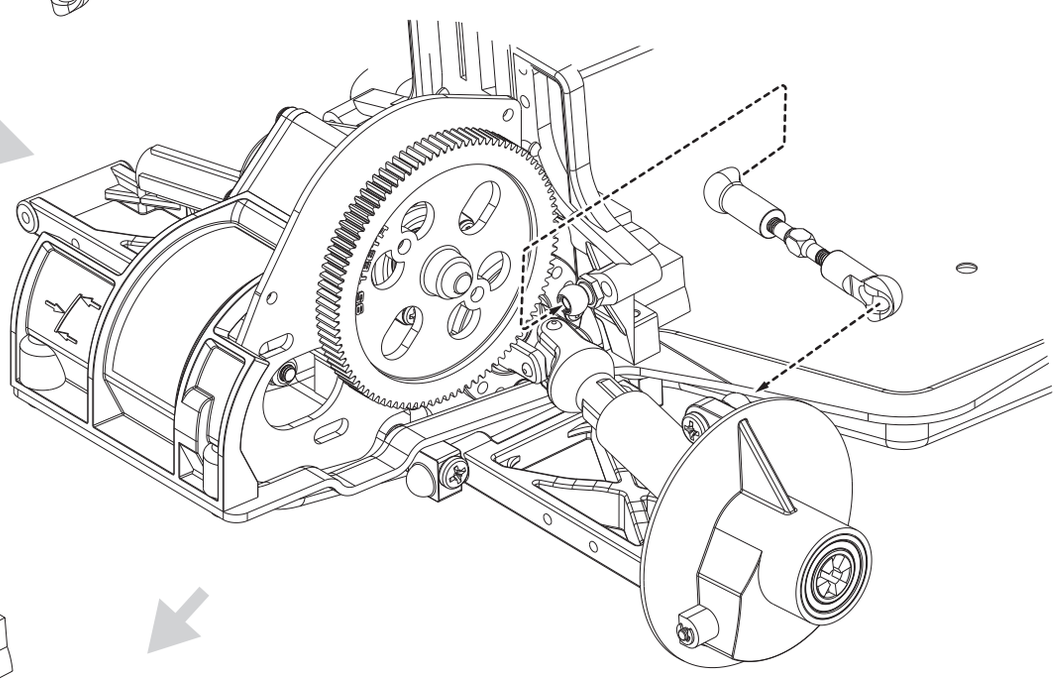
'E' Clip

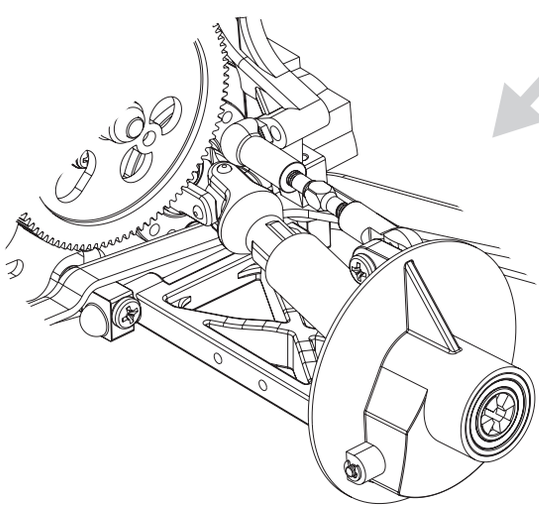


Note the shape of the turnbuckle. This side of the turnbuckle is the left hand thread.







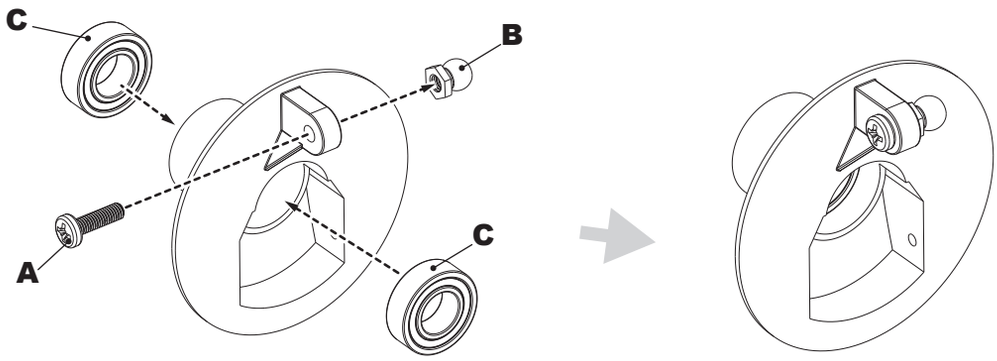


BAG D - Step 34

A x1
M3 x 10 Pan Hd Screw

B x1
Pivot Ball

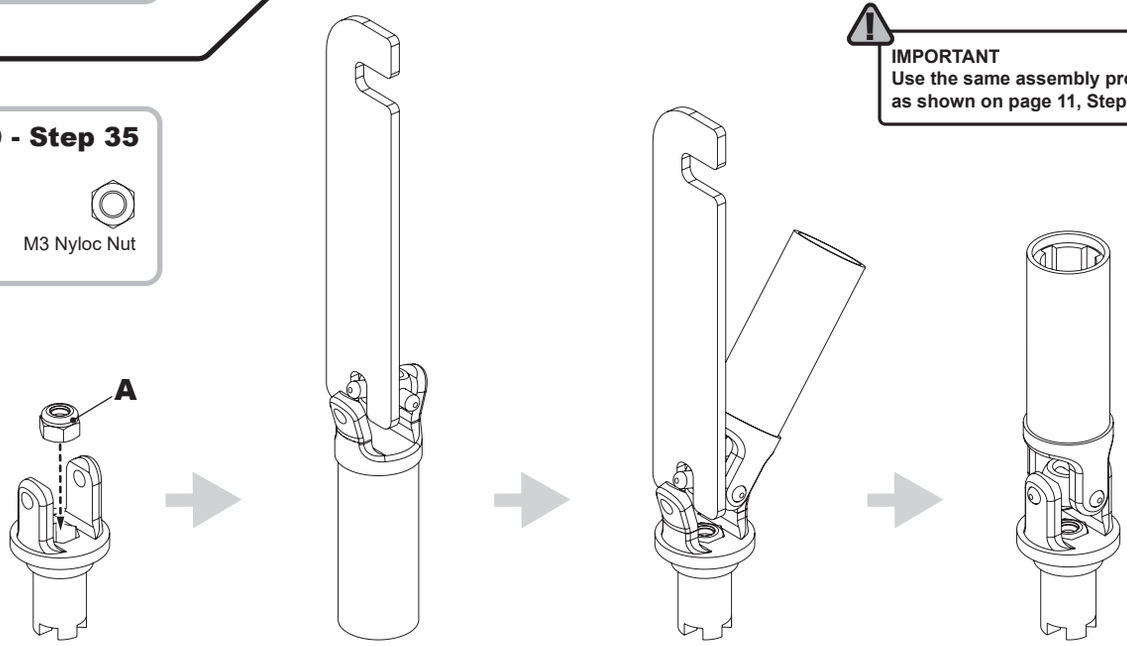
C x2
Ø8 x Ø16 x 5mm Bearing

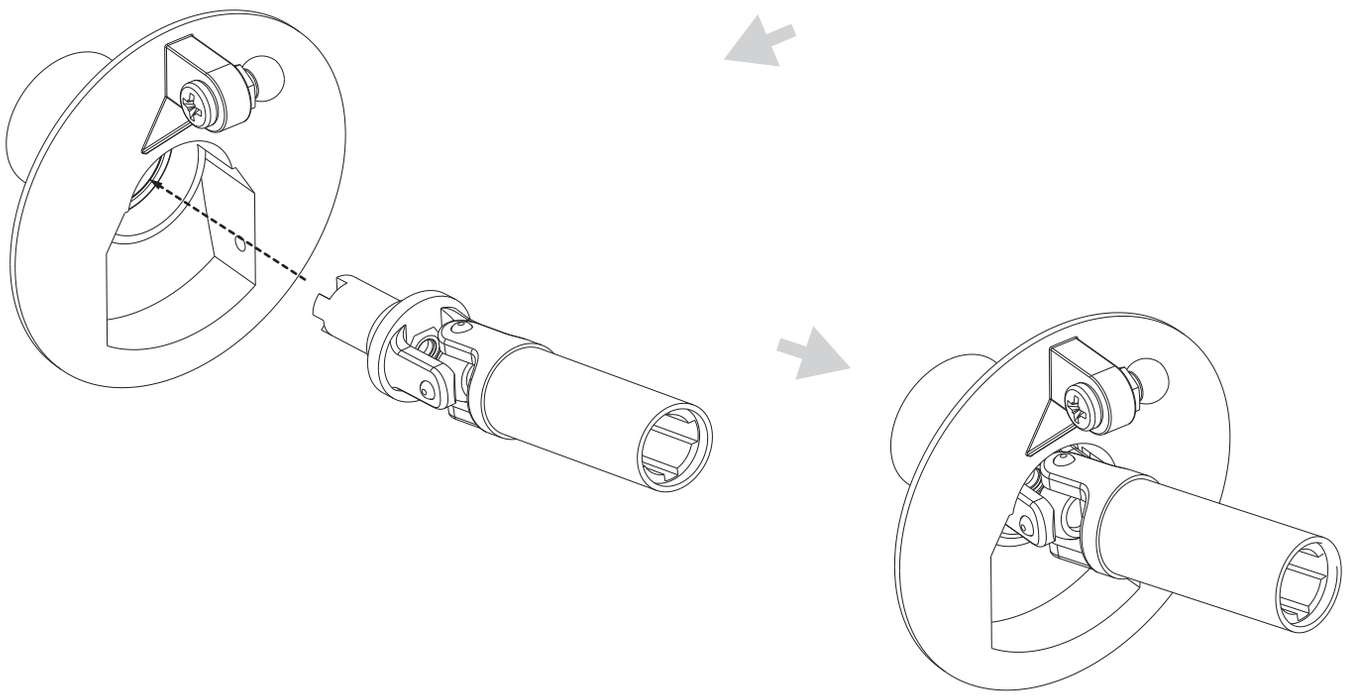


IMPORTANT
Use the same assembly procedure as shown on page 11, Step 22a.

BAG D - Step 35

A x1
M3 Nyloc Nut





BAG D - Step 36

A x1

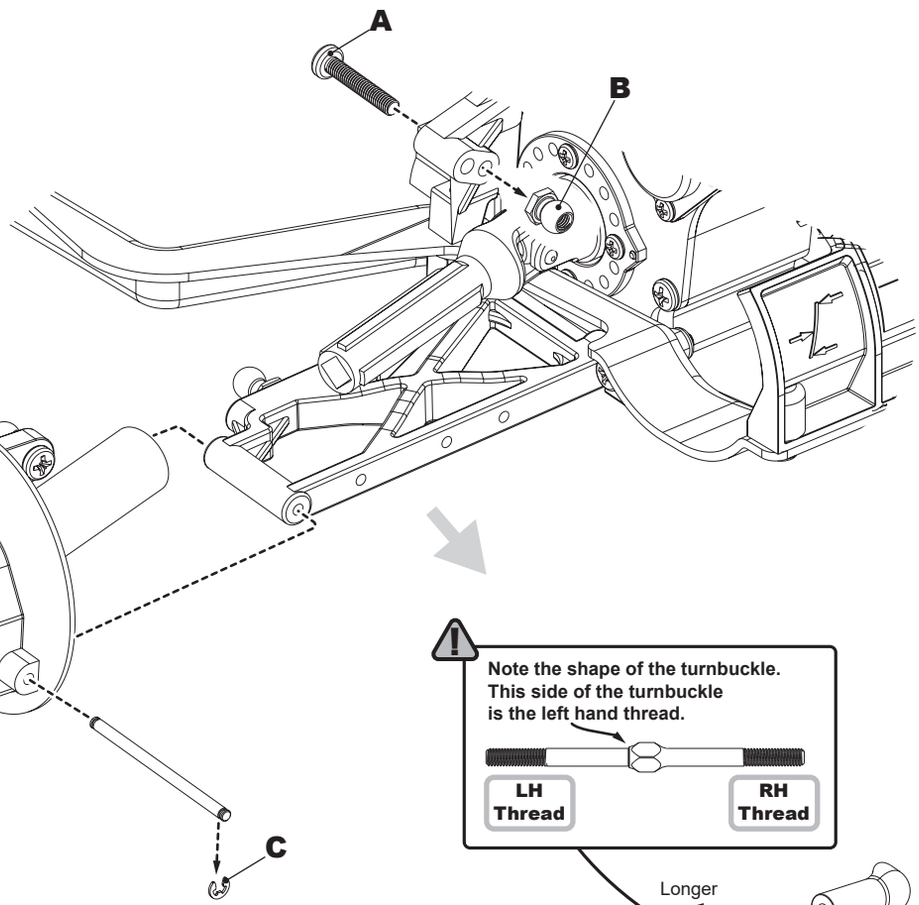
M3 x 16 Pan Hd Screw

B x1

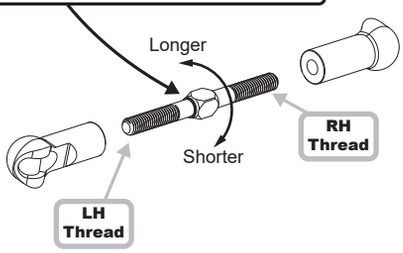
Pivot Ball

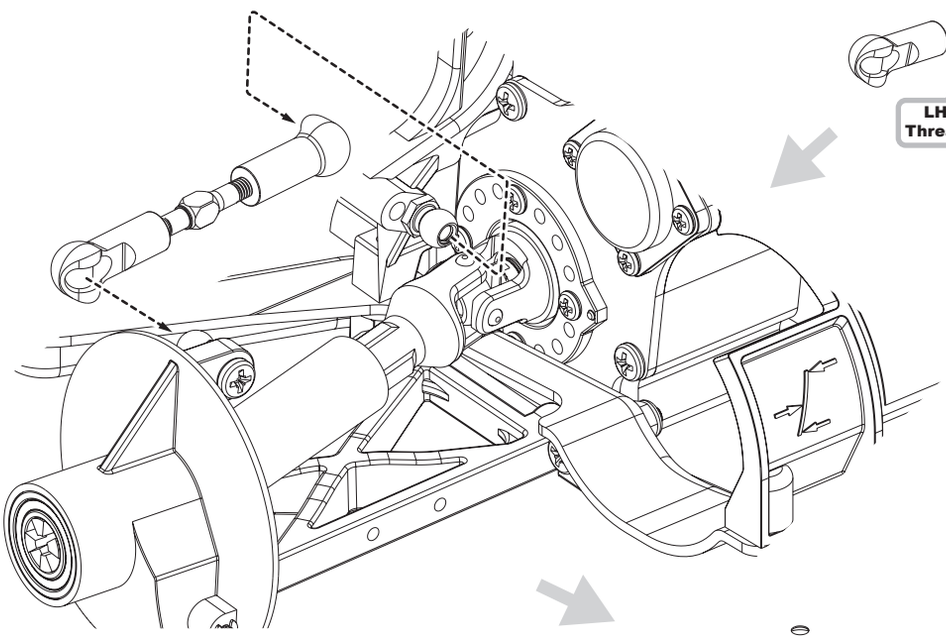
C x2

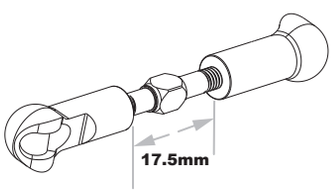
'E' Clip

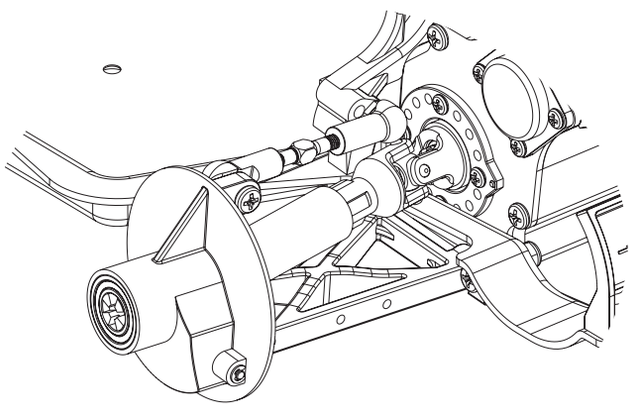


Note the shape of the turnbuckle. This side of the turnbuckle is the left hand thread.



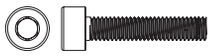






BAG D - Step 37a

A x2



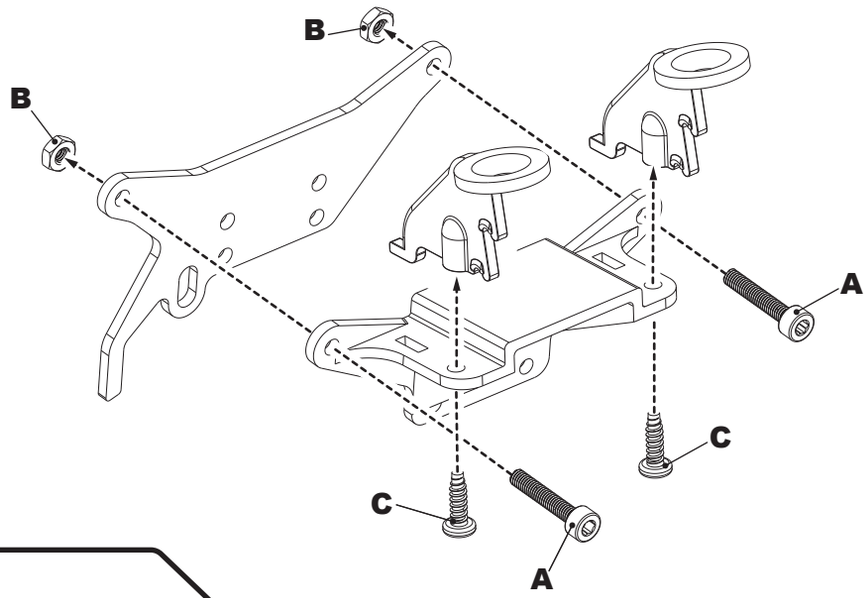
M3 x 16 Cap Hd Screw

B x2

M3 Nut

C x2

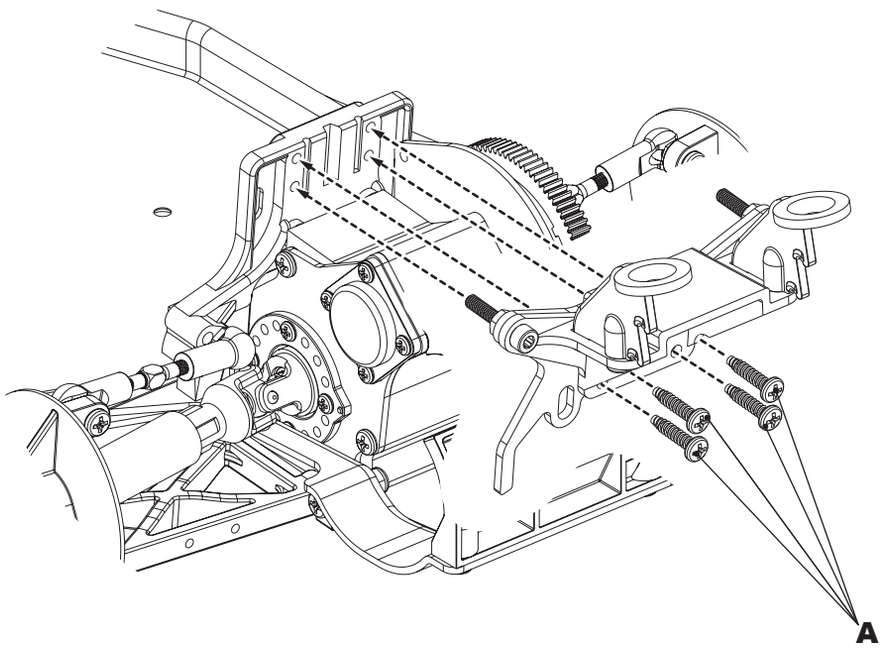
No4x 3/8" Pan Hd Screw

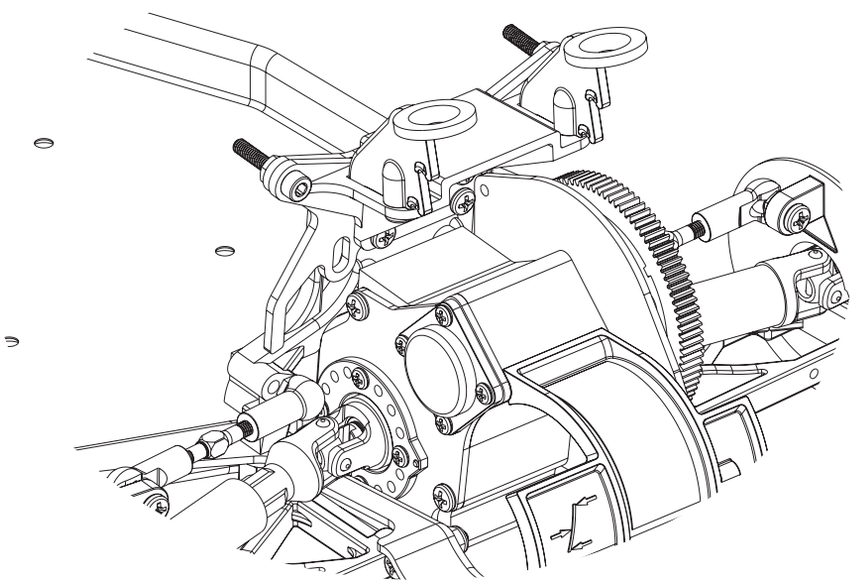


BAG D - Step 37b

A x4

No4x 1/2" Pan Hd Screw





BAG D - Step 38

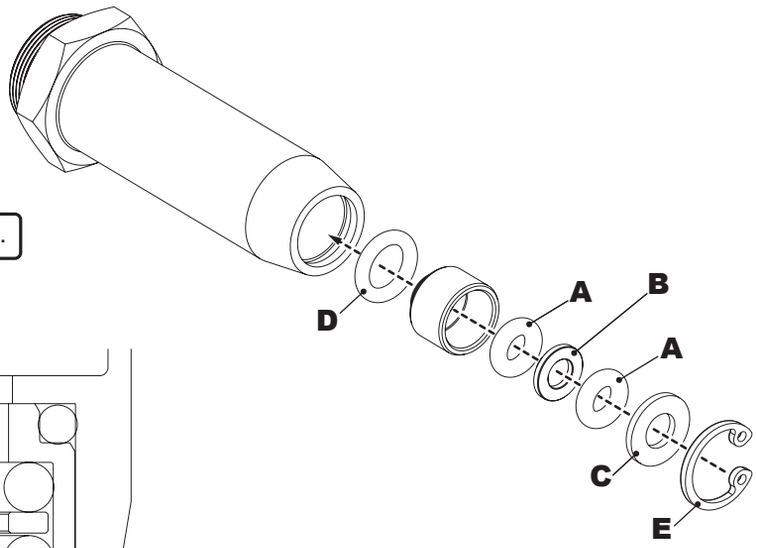
A x4
'O' Ring Red Small

B x2
Black Washer 0.75mm

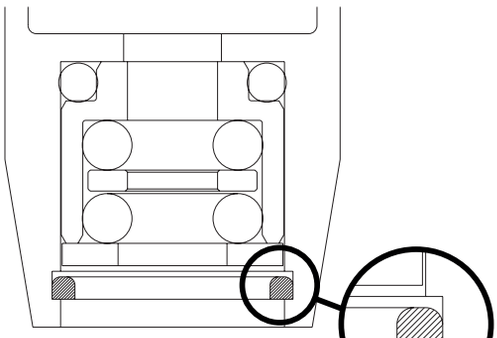
C x2
White Washer 0.80mm

D x2
'O' Ring Red Large

E x2
Circlip



Make two shocks the same.



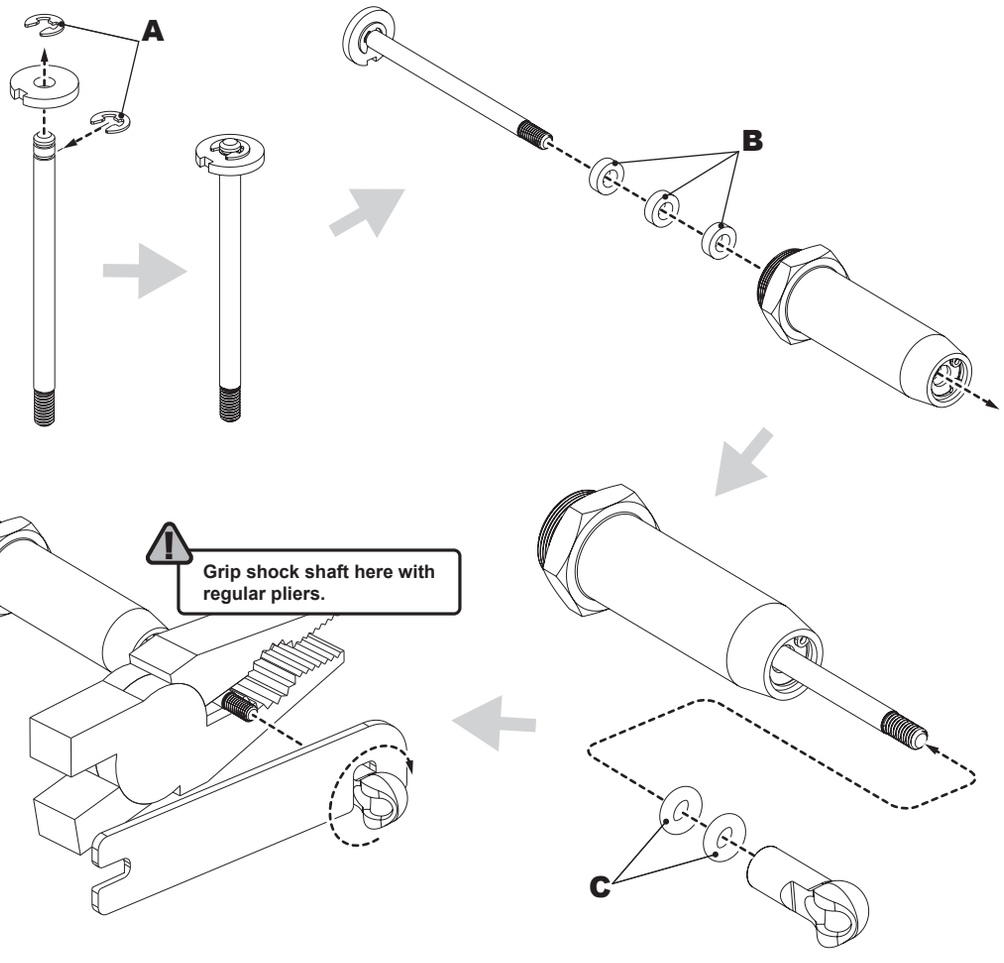
Note which way round the circlip fits. Rounded edge in first. Do not over squeeze it. Ensure the circlip is properly located in the groove.

BAG D - Step 39

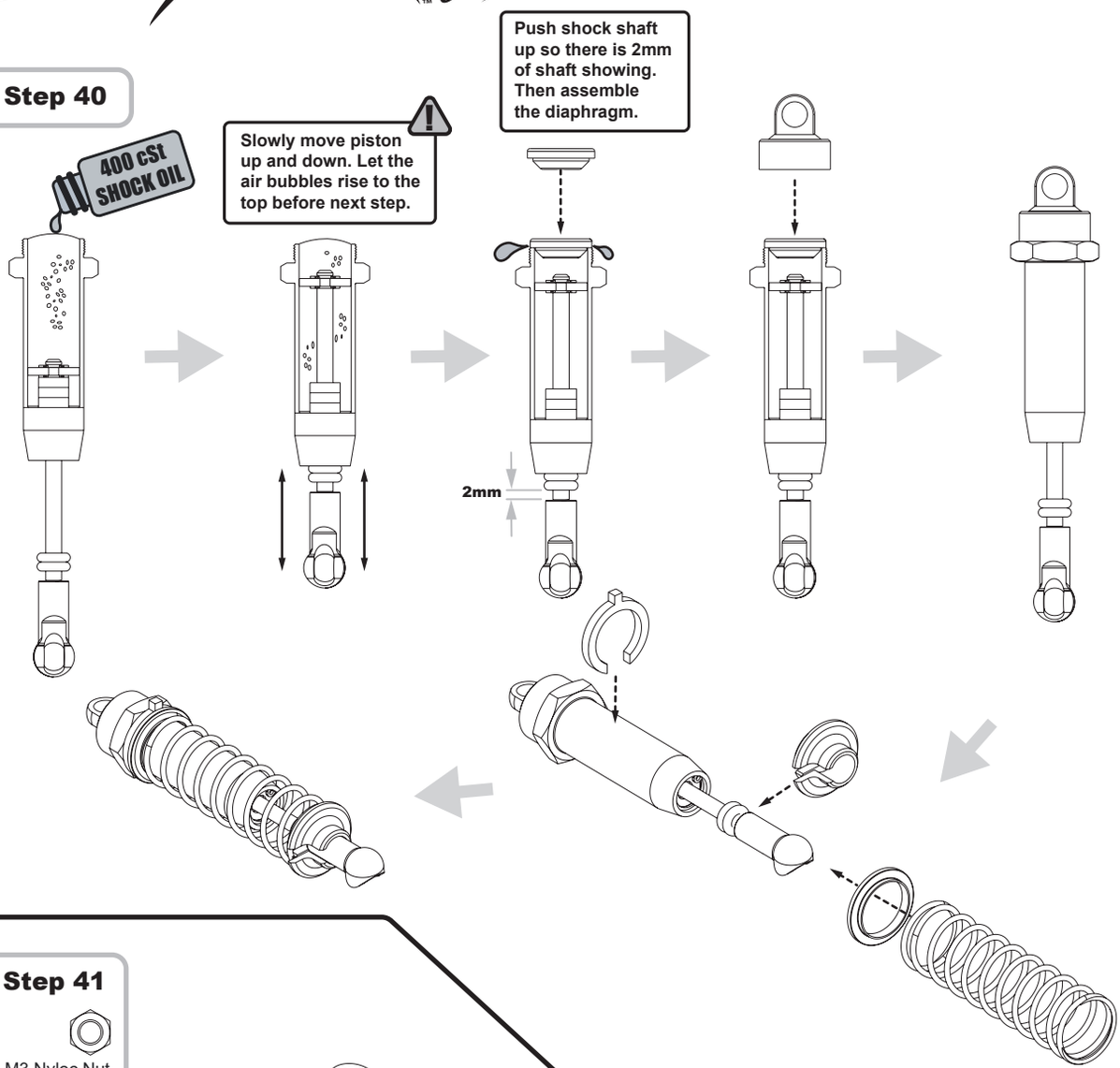
A x4
1/8th 'E' Clip

B x6
White Washer 2.0mm

C x4
'O' Ring Black



BAG D - Step 40



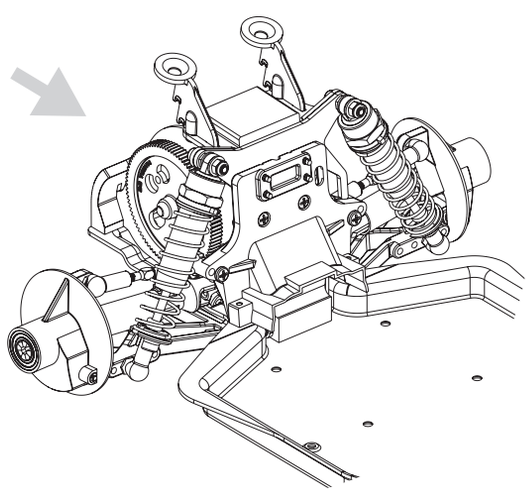
BAG E - Step 41

A x2

M3 Nyloc Nut

B x2

8mm Plastic Washer



BAG E - Step 42

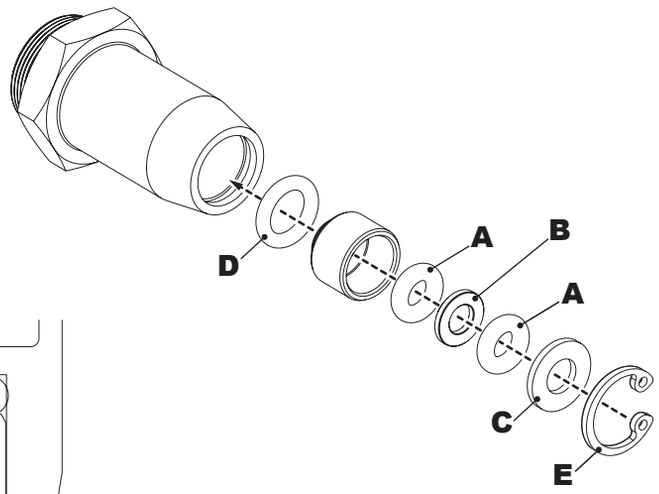
A x4
'O' Ring Red Small

B x2
Black Washer 0.75mm

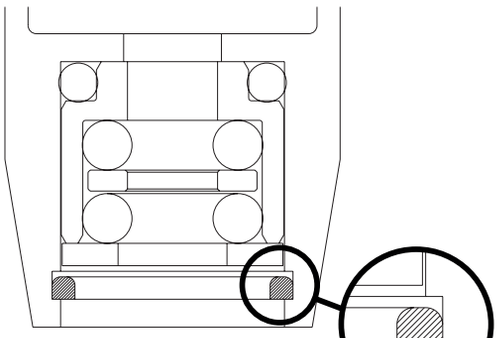
C x2
White Washer 0.80mm

D x2
'O' Ring Red Large

E x2
Circlip



Make two shocks the same.



Note which way round the circlip fits. Rounded edge in first. Do not over squeeze it. Ensure the circlip is properly located in the groove.

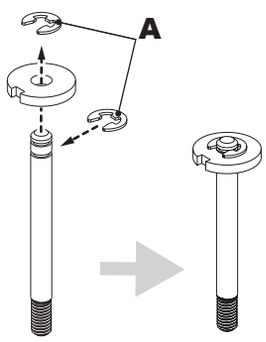
BAG E - Step 43

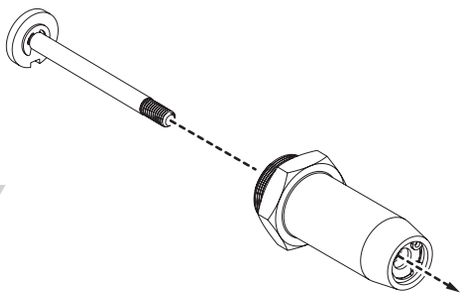
A x4
1/8th 'E' Clip

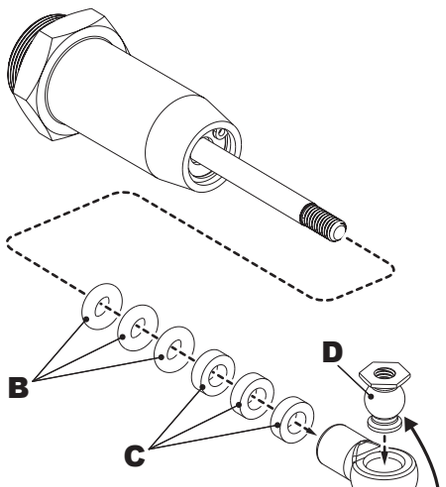
B x6
White Washer 2.0mm

C x6
'O' Ring Black

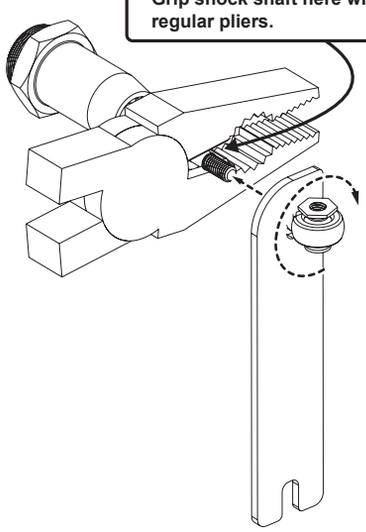
D x2
Rose Joint



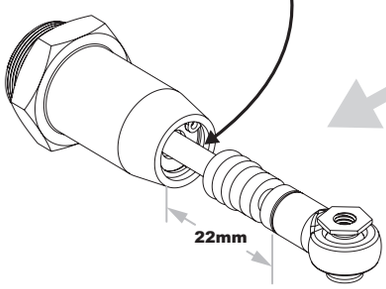




Grip shock shaft here with regular pliers.

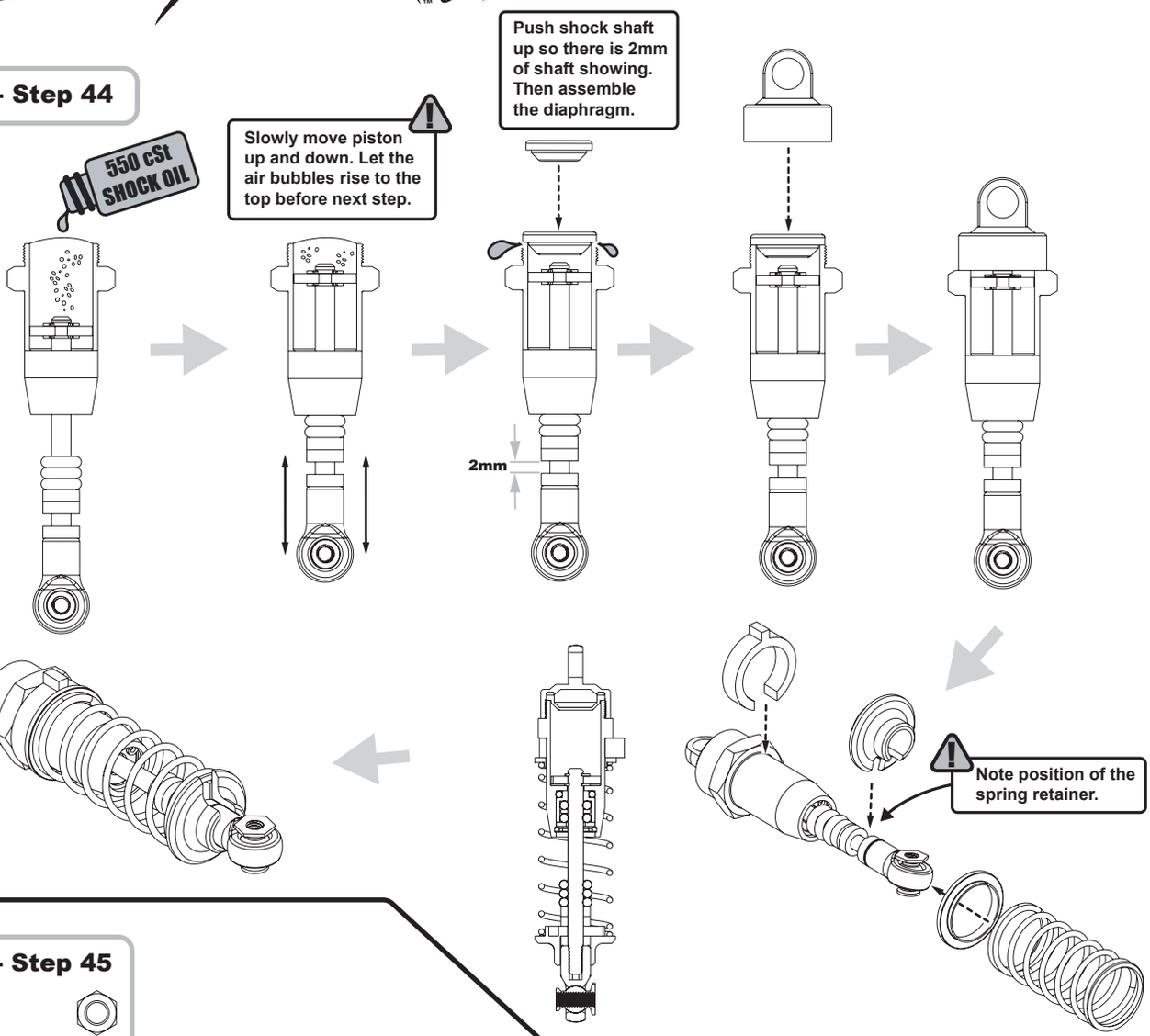


Be careful not to damage the polished area of the shock shaft.



Carefully insert using regular pliers or shock shaft pliers.

BAG D - Step 44

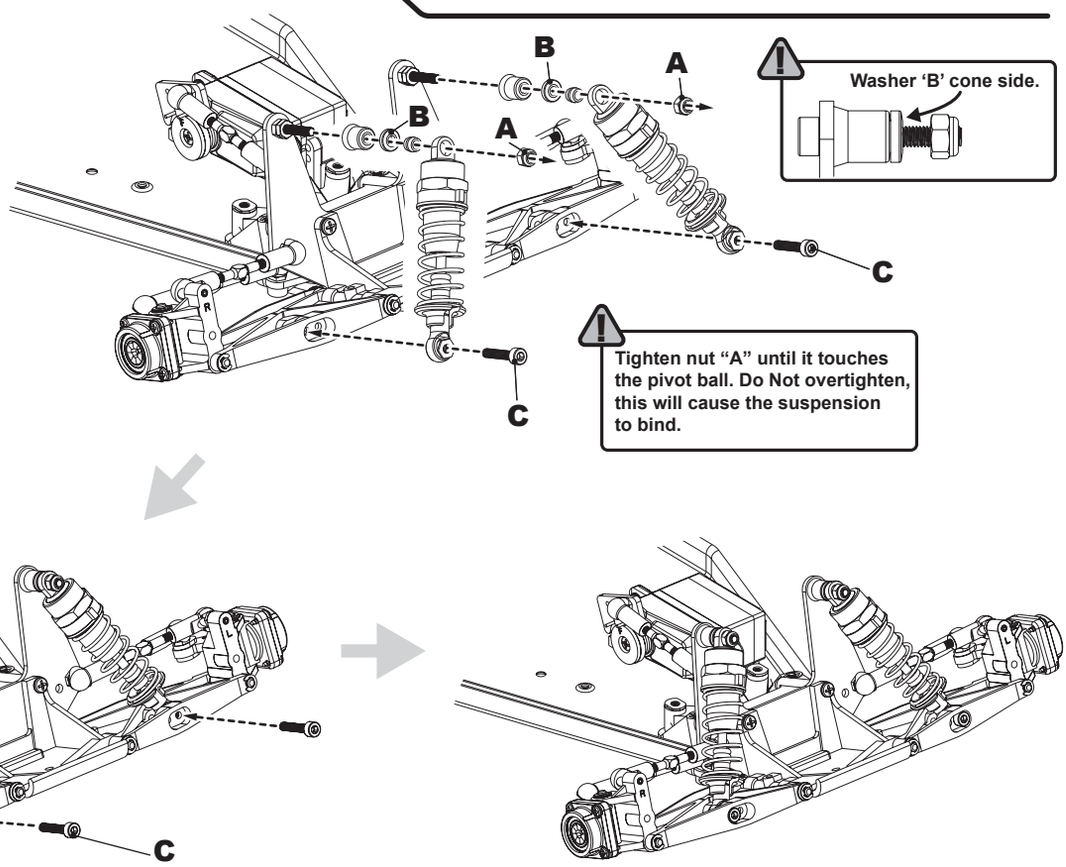


BAG E - Step 45

A x2 — M3 Nyloc Nut

B x2 — 8mm Plastic Washer

C x2 — M3x 16 Cap Hd Screw

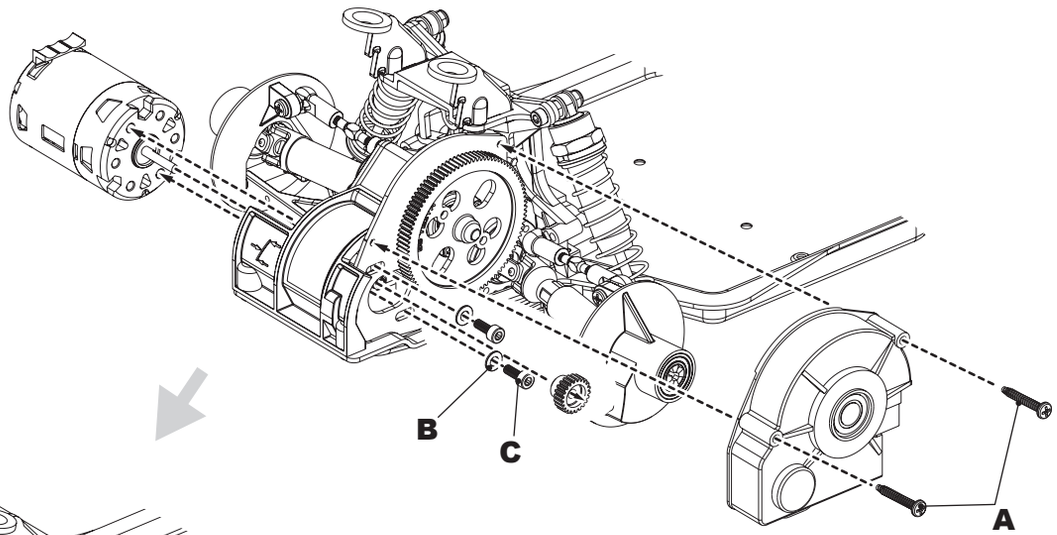


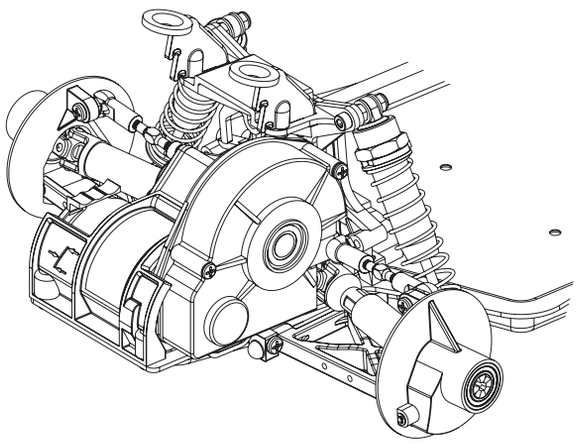
BAG E - Step 46

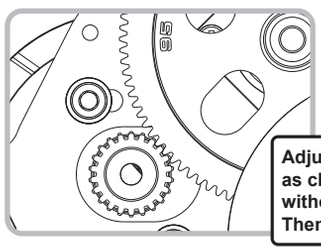
A x2
No4x 3/4" Pan Hd Screw

B x2
M3 Washer

C x2
M3x 8 Cap Hd Screw



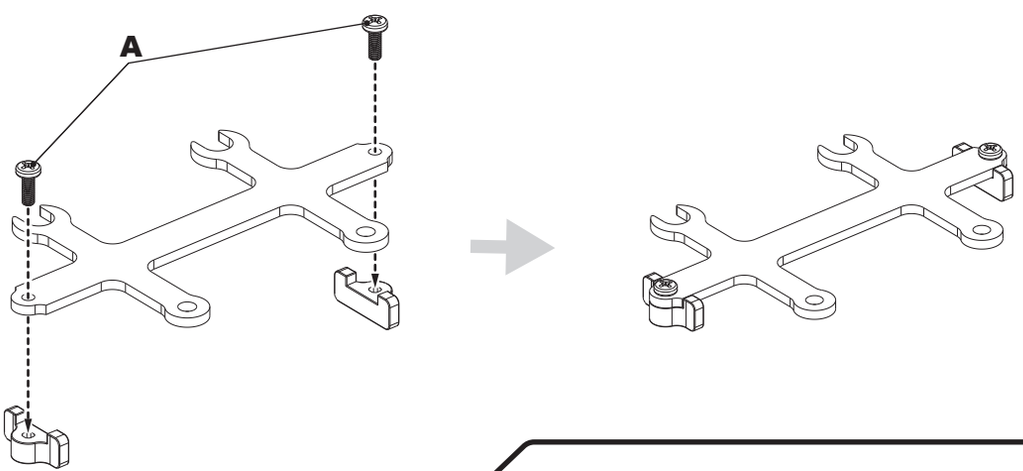




Adjust the gear mesh as close as possible without binding. Then tighten the screws.

BAG E - Step 47

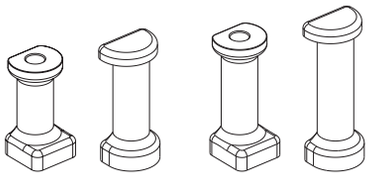
A x2
M3 x 8 Pan Hd Screw



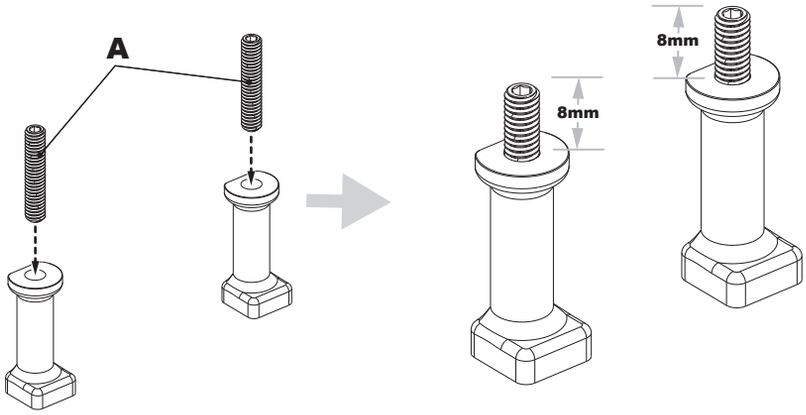
BAG E - Step 48

A x2
M3 x 20 Grub Screw

The kit contains regular and LCG LiPo posts. The short Posts are for LCG LiPo's.



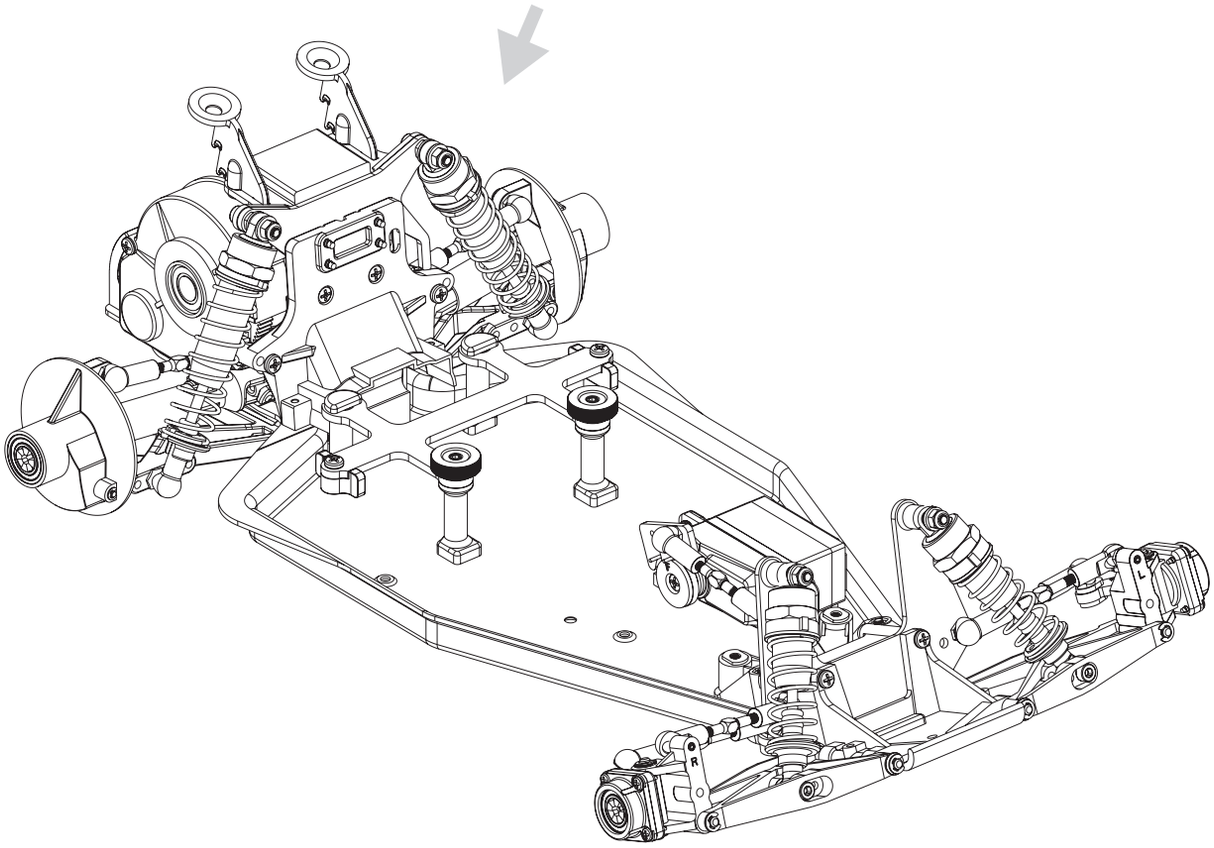
LCG LiPo Posts Regular LiPo Posts



BAG E - Step 48b

A x4

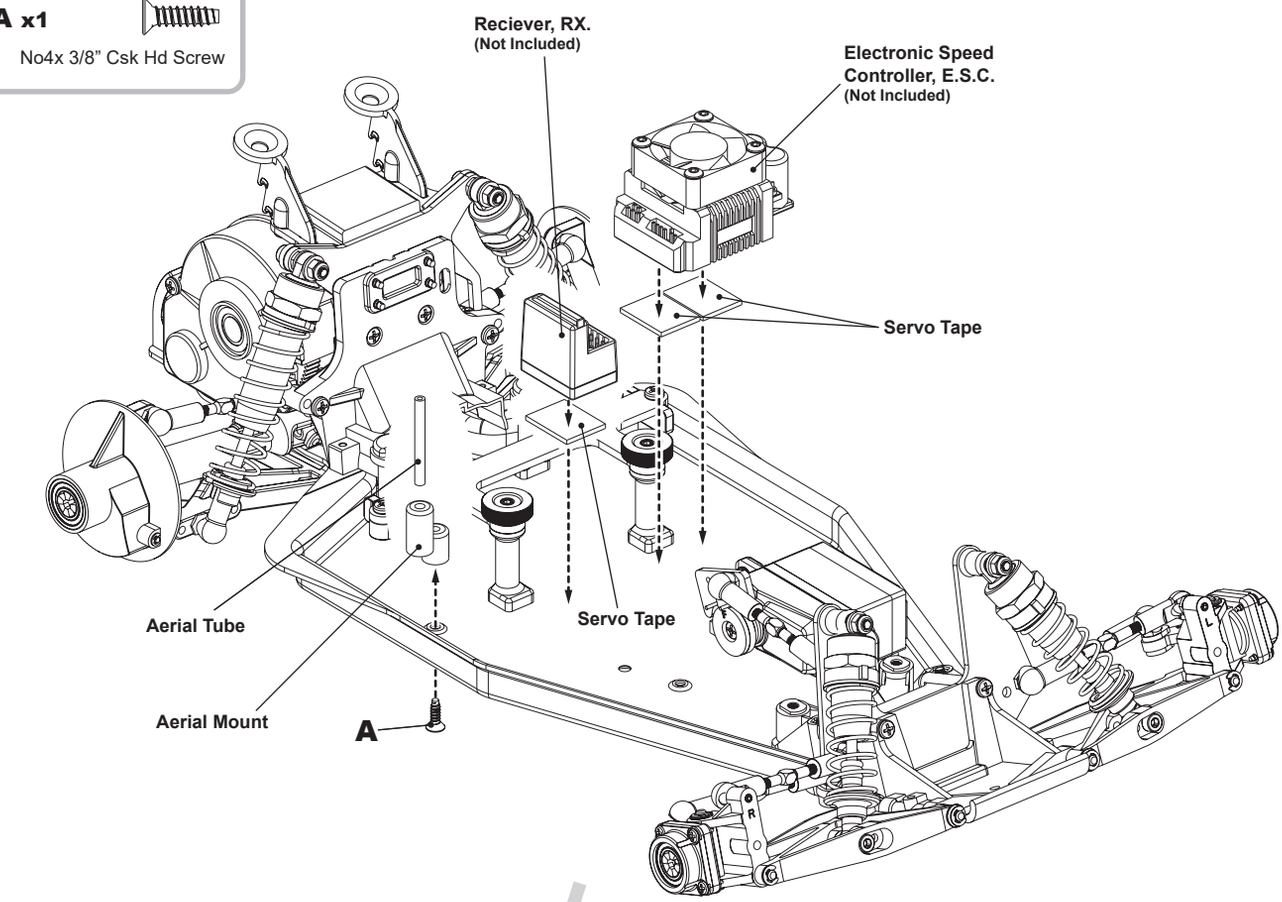
M3x 8 Csk Hd Screw

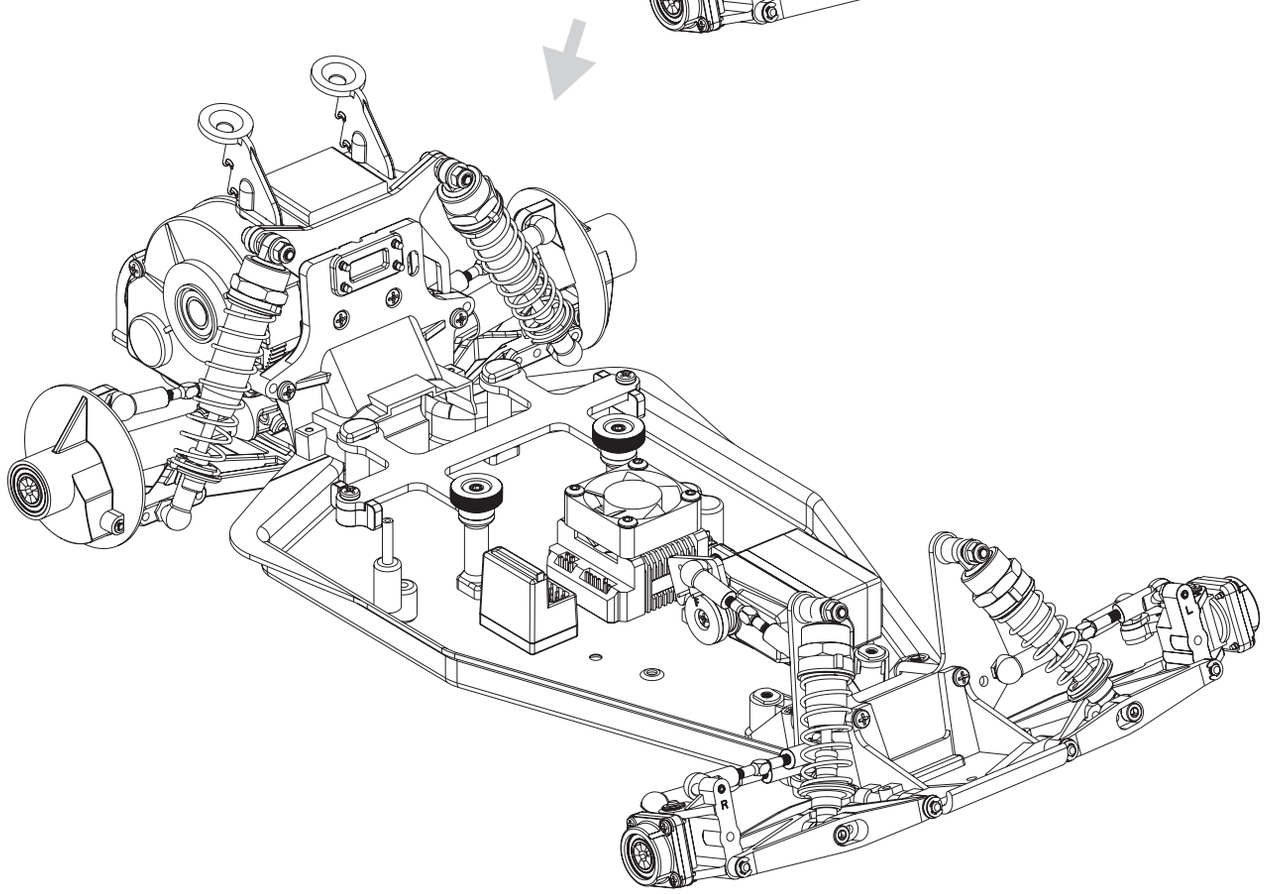


BAG E - Step 49

A x1

No4x 3/8" Csk Hd Screw

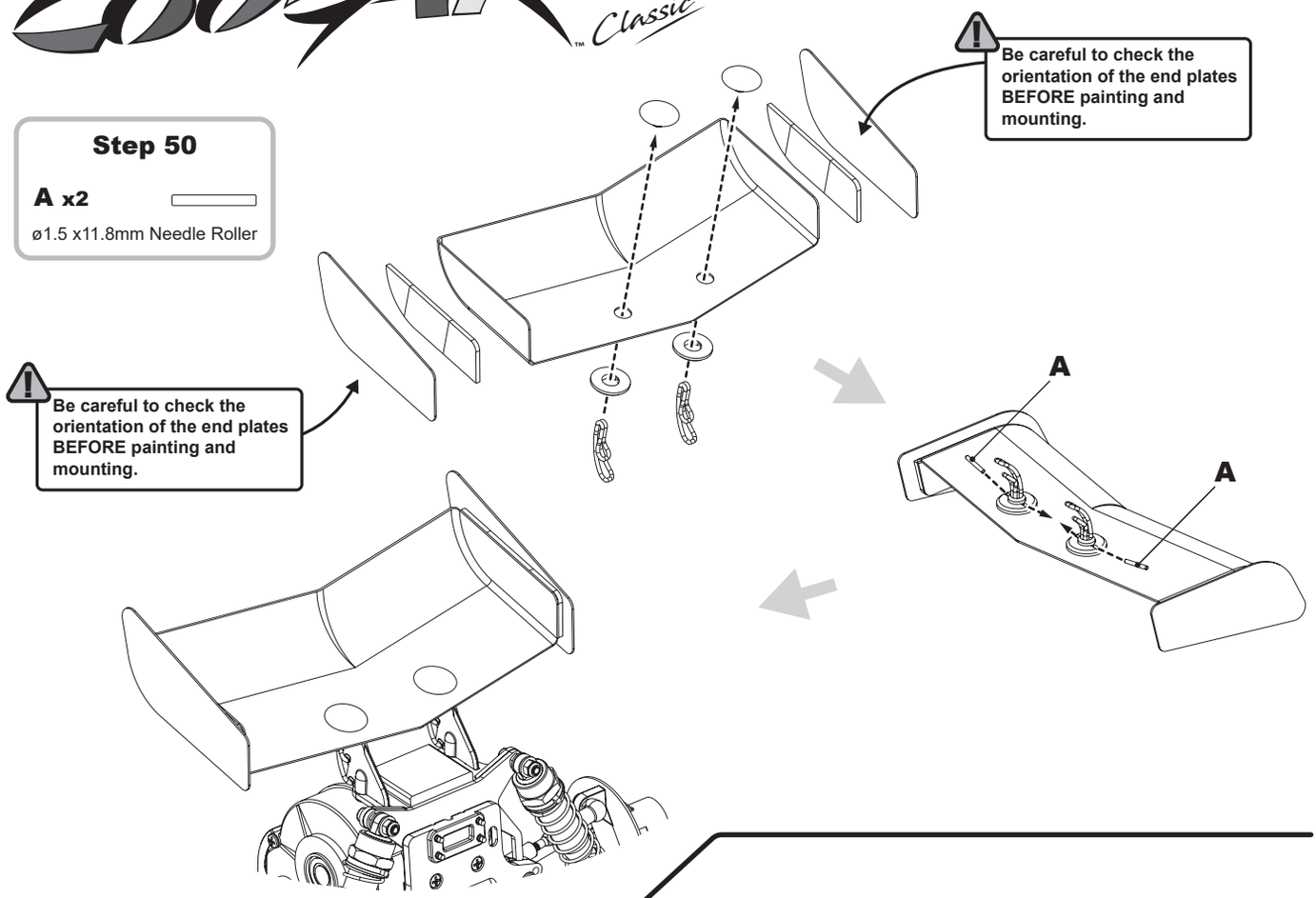




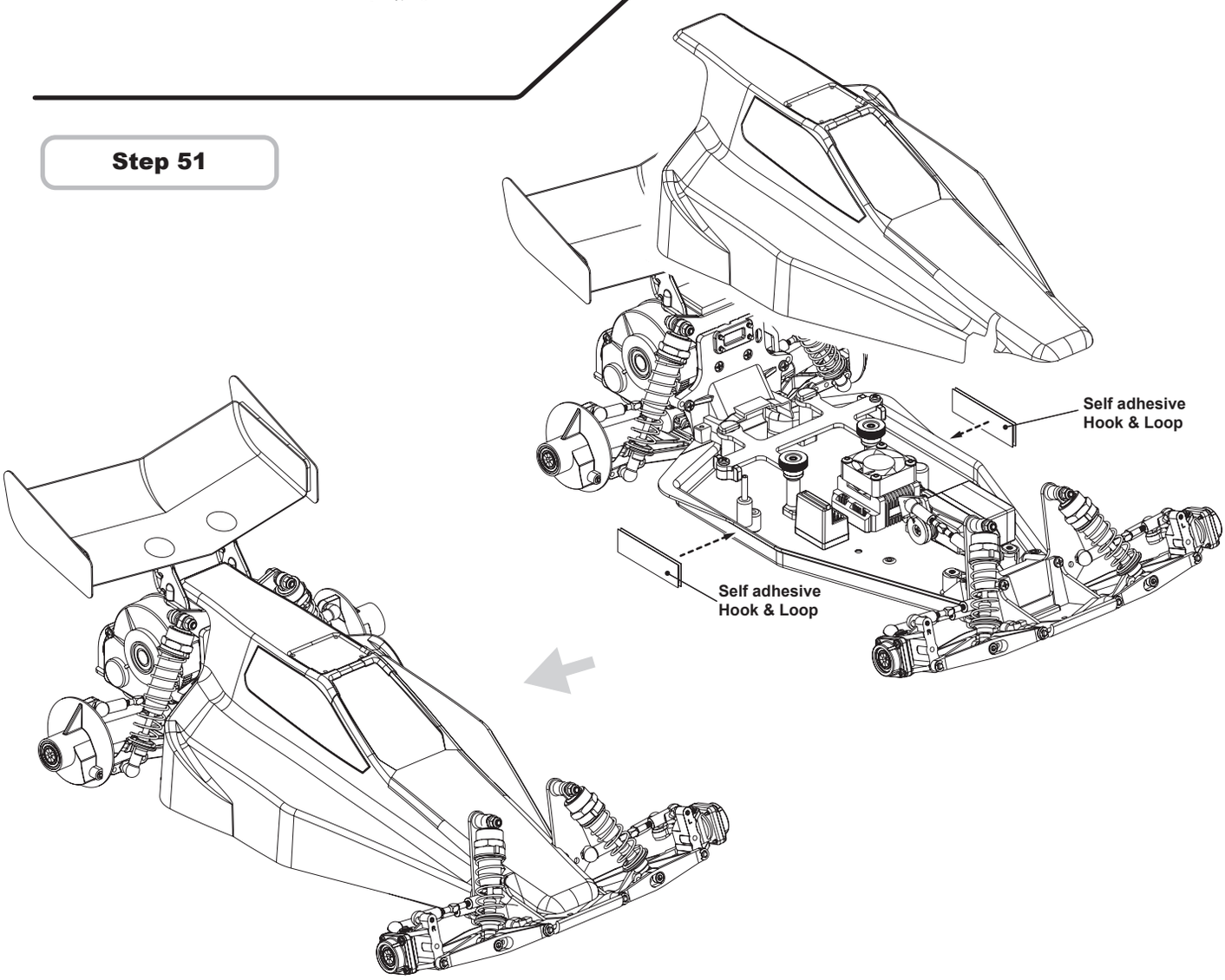
Step 50

A x2

ø1.5 x11.8mm Needle Roller



Step 51



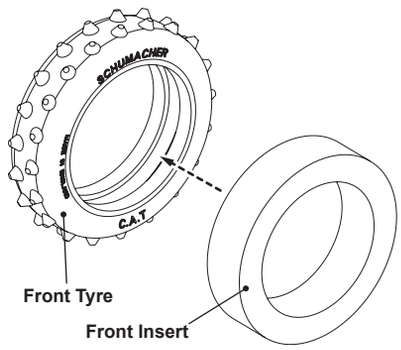
BAG E - Step 52

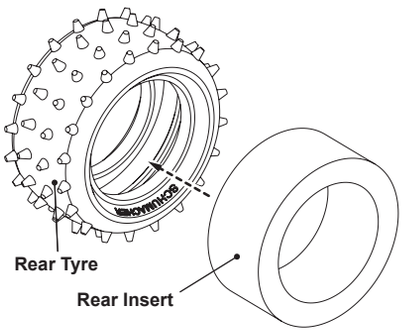
A x2 — M3x 20 Cap Hd Screw

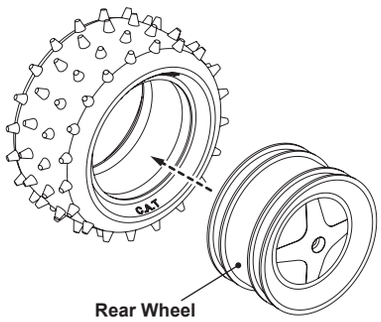
B x2 — M3x 10 Cap Hd Screw

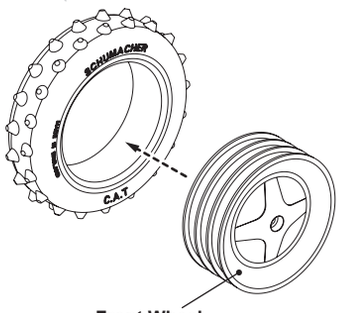
CA GLUE

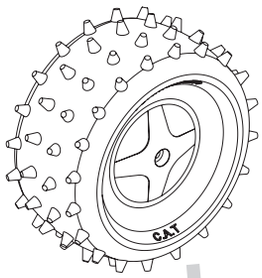
If required, use CORE Tyre Glue (CR522) to stick the tyres to the wheels.

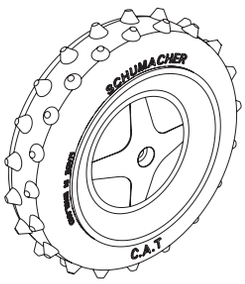


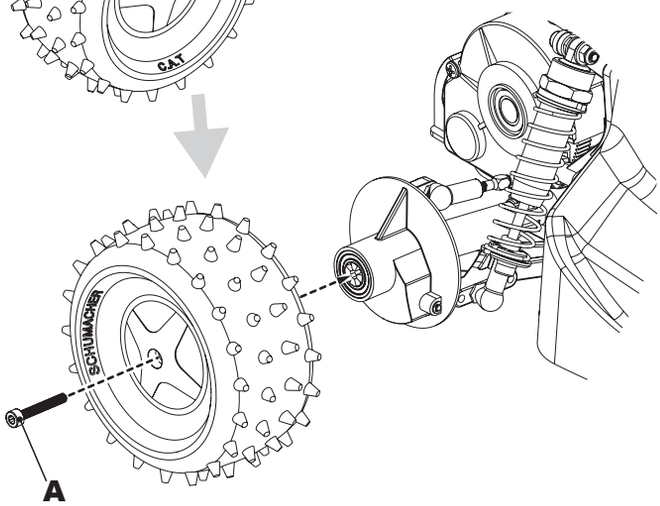


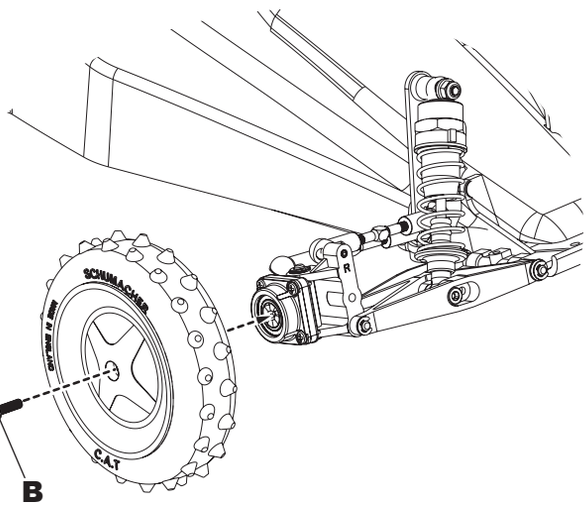


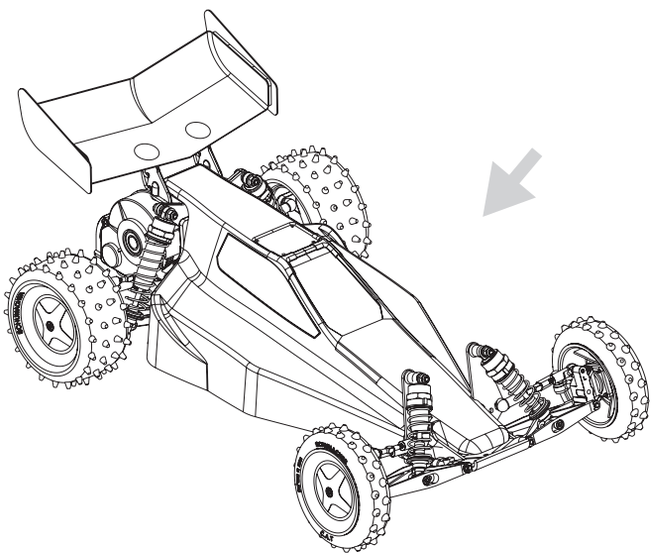






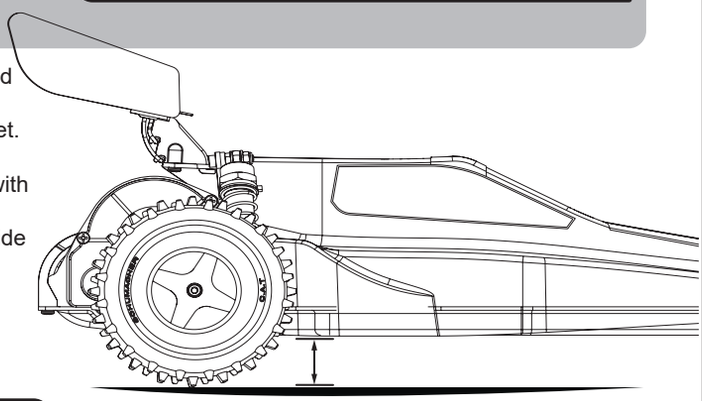






TRACK SETTINGS

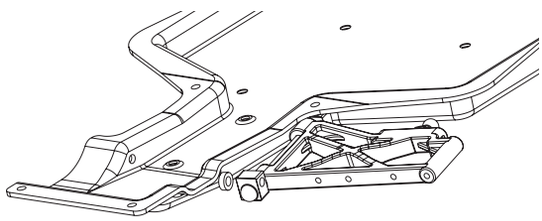
RIDE HEIGHT



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

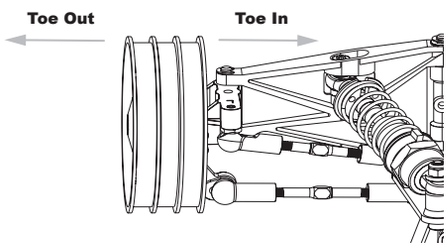
See Page 09 Bag B - Step 17 & 18



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 adding/removing washers behind the rear suspension mount. 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.

FRONT TOE

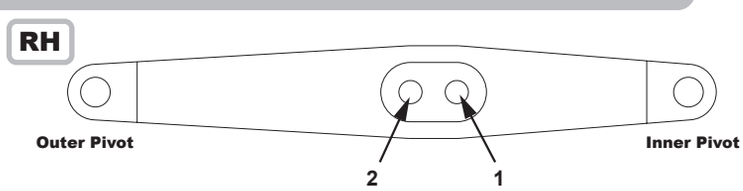
See Page 06 Bag B - Step 11



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 WISHBONE SHOCK MOUNTING HOLE

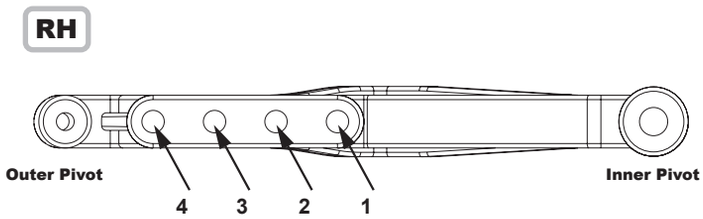
See Page 24 Bag E - Step 45



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 09 Bag B - Step 17 & 18

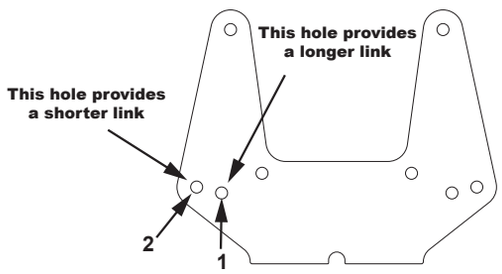


Hole 3 works best for most track conditions giving good traction and drive through the turns whilst maintaining good stability over the bumps. Moving to hole 4 on the wishbone will decrease traction but will allow the rear to free up more in the turns. This setting would usually only get used on high 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 holes 1 and 2 with harder springs and thicker oil. This should help improve the handling.

FRONT CAMBER LINKS

See Page 05 Bag A - Step 10a

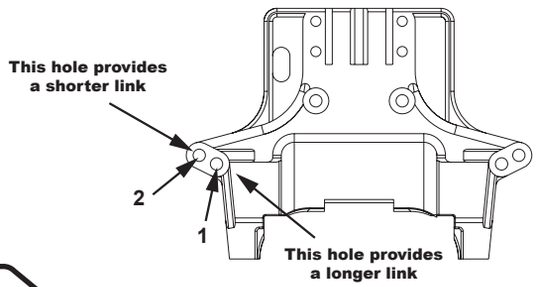
The kit settings for the front camber link position (2) and length are used by the team for most tracks. A shorter front link will make the car roll less and speed up the cars initial steering response. This is a better choice for bumpy, low grip tracks.
A longer front link (Hole 1) makes the front of the car roll more and offers less steering reaction at high speed. We would recommend this on fairly smooth high grip tracks.



REAR CAMBER LINKS

See Pages 17 & 19 Bag D - Step 33 & 36

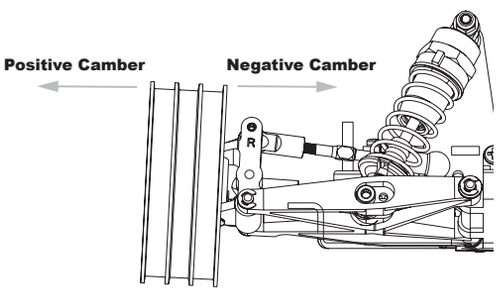
The kit setting for the rear camber link is the best compromise for most tracks. The longer link (Hole 1) will make the car roll more and gain side traction, making the car easier to drive. Shortening the rear camber link (Hole 2) will make the rear of the car roll less in the corners, and square up faster when accelerating away from tight turns. Longer links are generally used on high grip tracks and shorter links on low grip tracks.



FRONT CAMBER

See Page 07 Bag B - Step 12

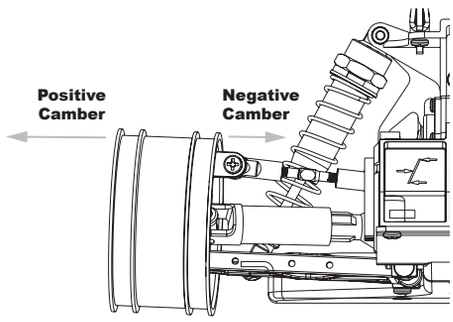
The usual team setting for static front camber is 1-2° negative at ride height (the top of the wheel is leaning inwards towards the car). Increasing the static camber will generally increase the mid corner steering, whereas decreasing the static camber usually makes the car smoother to drive by reducing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



REAR CAMBER

See Pages 17 & 19 Bag D - Step 33 & 36

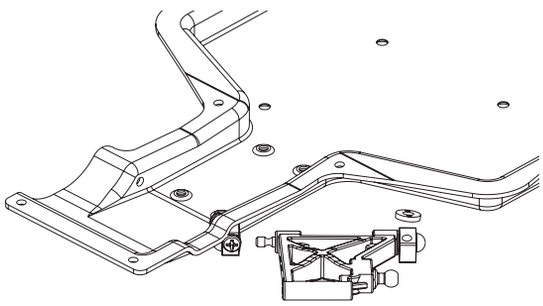
The usual team setting for static rear camber is 1° negative at ride height (the top of the tyre leaning inwards towards the car). Increasing the static rear camber will increase the traction when exiting the turns, but will be less stable at high speed. Decreasing the camber will reduce stability and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



REAR ANTI SQUAT

See Page 09 Bag B - Step 16

The Kit build anti squat is set at 2°. This works best on most tracks. The anti-squat can be reduced by adding a washer above the front pivot block, or increased by removing the kit 1.6mm washer, (the wishbone may need to be trimmed for clearance). 1.6mm of adjustment = 2°. If you increase the anti squat angle you will find the car will support itself better through aggressive bumps and reduce over rotation on corner exit. It's best to stay between 1 and 2 degrees.



COUGAR GEAR CHART Standard Transmission

⚠ Motor Limit 17.5 Brushless

Minimum Tooth Sum 108T - Maximum Tooth Sum 120T - Internal Ratio 2.43:1

		17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
U229	95	13.57	12.82	12.14	11.54	10.99	10.49	10.03	9.61	9.23									
U230	93	13.29	12.55	11.89	11.29	10.76	10.27	9.82	9.41	9.03	8.69	8.37							
U231	89			11.38	10.81	10.29	9.82	9.40	9.01	8.65	8.31	8.01	7.72	7.45	7.20	6.97			
U8308	86						9.49	9.08	8.70	8.35	8.03	7.74	7.46	7.20	6.96	6.74	6.53	6.33	6.14

COUGAR GEAR CHART U7600 Pro Transmission Conversion

⚠ Motor Limit 6.5 Brushless

Minimum Tooth Sum 108T - Maximum Tooth Sum 120T - Internal Ratio 2.07:1

		17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
U4163	95	11.55	10.91	10.33	9.82	9.35	8.92	8.54	8.18	7.85									
U7154	89			9.68	9.20	8.76	8.36	8.00	7.66	7.36	7.07	6.81	6.57	6.34	6.13	5.93			
U3351	83									6.86	6.60	6.35	6.13	5.91	5.72	5.53	5.36	5.20	5.05
U3350	82										6.52	6.28	6.05	5.84	5.65	5.47	5.30	5.14	4.98
U3348	80												5.90	5.70	5.51	5.33	5.17	5.01	4.86
U7616	78														5.37	5.20	5.04	4.88	4.74

OPTION PARTS

U7600 - Option Pro Transmission Conversion

U7245 - Alloy Eccentric (pr)

U8302 - C/F Rear Shock Mount - Cougar Classic

U7315 - Titanium Turnbuckle - 35mm - Silver - pr
U7316 - Titanium Turnbuckle - 39mm - Silver - pr
U7317 - Titanium Turnbuckle - 45mm - Silver - pr

U7419 - Titanium M4 x 20 Grub Screw (pr)

U8299 - Ball Raced Steering Set - Cougar Classic

U7424 - Alloy Lightweight LiPo Nut - (pr)

U7243 - Alloy Washer Carrier

U8298 - CF Front Shock Mount - Cougar Classic

CR290 - 1/12 Servo Saver 23T Sanwa/KO
CR291 - 1/12 Servo Saver 25T Futaba

www.racing-cars.com

SPARES LISTS

Chassis Parts

U119 Aerial Tube - Pack 4
U122 Velcro 1/2metre x 16mm
U1042 Aerial Mount - Universal
U4765 Lipo Post Nut 2pcs - Off Road
U4778 LiPo Stops 4pcs - Off Road
U7045 Lipo Posts Standard - KD,KC,L1/EVO,XLS,TC,LD/2,ST
U7046 Lipo Posts Short - KD,KC,L1/EVO,LD/2,ST
U7546 Servo Mounts (pr) - TOP CAT
U7547 Alloy Chassis - TOP CAT
U7549 Wing Mount Mouldings - TOP CAT
U7550 Shorty LiPo Strap S2 - TOP CAT
U7580 Rear Bulkhead - TOP CAT
U7588 Rear Motor Guard - TOP CAT
U8291 Front Bulkhead - Cougar Classic
U8292 Steering and Radius Arm - Cougar Classic
U8293 Manual - Cougar Classic
U8304 Servo Saver Set - Cougar Classic
U8306 Centre Track Rod - Cougar Classic

Bodys & Decals

U5147 Bodyshell + Decals + Window Mask - Cougar Classic
U5148 Wing and Endplates - Cougar Classic
U8294 Decals - Cougar Classic (pk3)

Transmission

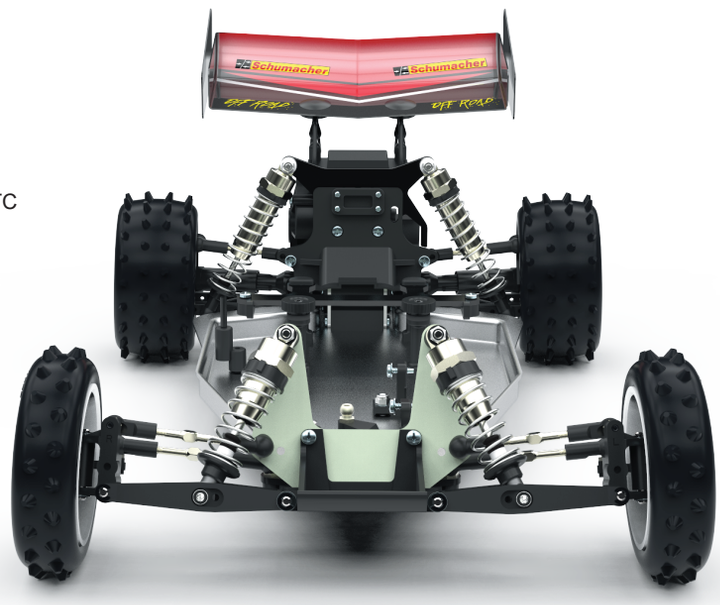
U7142 Integrator Axle - XLS,TC
U7144 Drive Shaft Mouldings 8 pcs - XLS,TC
U7152 UJ Assembly pr - XLS,TC
U7158 Integrator Washer pr - XLS,TC
U7187 Eccentrics pr - XLS,TC
U7188 Bearing Housings pr - XLS,TC
U7205 Front Washer Carrier pr - XLS,TC
U7216 Thrust Race F1/8 x 5/16 x 9/64 Grooved - XLS,TC
U7240 Pro Diff Rebuild Kit - XLS,TC
U7571 Front Axles (pr) - TOP CAT
U7586 Belt 72T 8.0 Wide (Kit) - TOP CAT
U7587 Layshaft (Kit) - TOP CAT
U7589 Gear Cover - TOP CAT
U7590 Alloy Layshaft Bush - TOP CAT
U7591 Alloy Motor Plate - TOP CAT
U7592 Alloy Cover Plate - TOP CAT
U7593 Transmission Housing - TOP CAT
U7594 Layshaft Pulley Set (Kit) - TOP CAT
U7595 Diff Pulley Set (Kit) - TOP CAT
U7596 Front Wheel Bearing Retainers (pr) - TOP CAT
U8173 Disc Spring 6 x 3.2 x 0.3mm pk8 - TC,XLS
U8279 Front Hub Carrier - Cougar Classic (pr)
U8308 86T Whisper Spur Gear Black

Bearings & Balls

U729 Chrome Steel Balls 3mm pk36-Fusion 28 turbo,XLS,TC
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)
U7155 Bearing 8 x 16 x 5 Black Seal (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)

Hardware

U1247 SPEED PACK - Wing Mount 'O' Ring
U1539 SPEED PACK - Self Tap Csk Hd
U1543 SPEED PACK - M3 Csk Hd
U1547 SPEED PACK - M3 Nuts
U1548 SPEED PACK - M3 Washers
U1551 SPEED PACK - E Clips -2 x 8pcs
U1633 SPEED PACK - Small Pins (pk)
U1960 SPEED PACK - O Rings; Various
U2885 Steering Levers Bush Set - Havoc
U3986 Suspension O'ring Tuning Set - SS/GT
U4222 Turnbuckle Adjuster HTT - 39mm - pr
U4223 Turnbuckle Adjuster HTT - 45mm - pr
U4298 Turnbuckle HT - 35mm - pr
U4651 SPEED PACK M3x10 Grub Screws (10pcs)
U4775 Pivot Ball 5.5mm - (4pcs)
U4987 SPEED PACK Needle Roller 1.5x11.8 (pk8)
U7090 SPEED PACK - M4x20 Grub Screw (pk4)
U7150 Pivot Ball 4 pcs - XLS,TC
U7165 SPEED PACK M3 x 16 SS Cap Hd (pk10)
U7166 SPEED PACK M3 x 20 SS Cap Hd (pk10)
U7209 Ball Sockets 4 pcs - XLS,TC
U7219 SPEED PACK M3 x 8 Pan Hd Pozi (pk10)
U7220 SPEED PACK M3 x 10 Pan Hd Pozi (pk10)
U7223 SPEED PACK M3 X 12 Grub (pk10)
U7226 SPEED PACK No 2 x 3/16 Pan Hd (pk10)
U7227 SPEED PACK No 2 x 1/2 Pan Hd (pk10)
U7229 SPEED PACK No 4 x 3/8 Pan Hd (pk10)
U7230 SPEED PACK No 4 x 1/2 Pan Hd (pk10)
U7231 SPEED PACK No 4 x 3/4 Pan Hd (pk10)
U7275 SPEED PACK M3 x 8 SS Cap Hd (pk10)
U7332 SPEED PACK WASHERS Dia 3.5 (pk15)
U7563 SPEED PACK - M3x16 Pan Pozi (pk10)
U7557 SPEED PACK - 2mm Circlips (pk10)
U7558 SPEED PACK - Double Sided Tape Pads (pk10)
U7259 SPEED PACK M3 x 8 Csk Pozi (pk10)
U7559 SPEED PACK - M3x10 SS Cap Hd (pk10)
U7562 SPEED PACK - M3 x10 Csk Pozi (pk10)
U7563 SPEED PACK - M3x16 Pan Pozi (pk10)
U7564 SPEED PACK - M3x20 Pan Pozi (pk10)
U7566 SPEED PACK - No2x3/8 Pan Pozi (pk10)
U7707 M3 Steel Washers (pk10)
U7709 M3 Black Alloy Washers 0.75mm (pk10)
U7711 M3 Black Alloy Washers 2.00mm (pk10)
U8272 SPEED PACK No 2 x 1/4 Pan Hd (pk10)



SPARES LISTS

Suspension

U322 Lower Front Susp Plate - 2WD
U748 Front Susp. Pivot Set - 2WD
U1129 Rear Pivot Blocks 1/8
U1425 Pivot Pin; grooved 44mmx1/8
U2330 Wishbone; Yoke and Strg Block; Big 6 (pr)
U3067 Yoke C Hub pr - Rascal,Riot
U3103 Pivot Pin; grooved 23mm 1/8 pr - Rascal,Riot,TC
U7367 Rod End Ball Wide & Socket pr - L1/EVO,ST
U7431 Rod End Socket (Dia 5.5mm) (pk4)
U7567 Grooved Pins 45mm (pr) - TOP CAT
U7568 Rear Wishbone LWB (pr) - TOP CAT
U7572 Rear Shock Mount - TOP CAT
U7578 Rear Hub Carriers (pr) - TOP CAT
U7584 Grooved Pins 2.0 x 34.0 (pr) - TOP CAT
U7585 Rear Shock Mount Support S2 - TOP CAT
U776 Top Bkt; Yokes;C.Tr. Rod - 2WD
U8295 Front Shock Mount F/G - Cougar
U8305 Front Wishbones - Cougar Classic (pr)

Shock Absorbers

U613 Spring Stop and Spacer Mouldings (pr)
U835 Vari Shock Seal Pack (pr)
U3937 Shock Mouldings
U4362 Small Bore Diaphragm - pk4
U7145 Rear Shock Body pr - XLS,TC
U7146 Front Shock Body pr - XLS,TC
U7147 Shock Cap pr - XLS,TC
U7148 Rear Shock Shaft pr - XLS,TC
U7149 Front Shock Shaft (pr) - CAT XLS
U7170 Shock Top Bush 4 pcs - XLS,TC
U7171 Shock Bush Internal pr - XLS,TC
U7172 Shock Rebuild Kit pr - XLS,TC
U7176 Front Pistons pr - XLS,TC
U7261 Shock Mouldings pr - XLS,TC
U7272 Shock Spring F6 Front (pr)
U7273 Shock Spring R4 Rear (pr)
U7432 Shock Spring Seat Moulded pr - L1,TC
U8328 Vintage Springs Short Set (7pr)
U8329 Vintage Springs Med Grey 2.7lb/in (pr)
U8330 Vintage Springs Med Blue 3.0lb/in (pr)
U8331 Vintage Springs Med Black 3.3lb/in (pr)
U8332 Vintage Springs Med Set (6pr)
U8362 Vintage Springs Med Green 3.6lb/in (pr)
U8363 Vintage Springs Med Orange 4.4lb/in (pr)
U8364 Vintage Springs Short Green 5.2lb/in (pr)
U8365 Vintage Springs Short Purple 6.9lb/in (pr)
U8366 Vintage Springs Short Orange 8.0lb/in (pr)
U8367 Vintage Springs Short Grey 3.5lb/in (pr)
U8368 Vintage Springs Short Blue 4.0lb/in (pr)
U8369 Vintage Springs Short Black 4.5lb/in (pr

Pinions

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.

Pinions Cont.

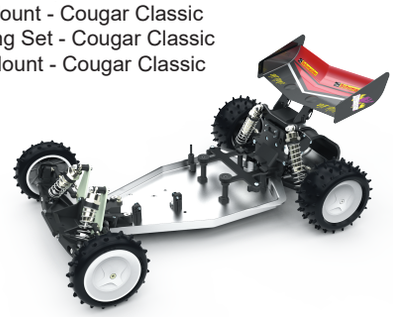
U3417 Pinion; Hard Alloy 48dp - 17T
U3418 Pinion; Hard Alloy 48dp - 18T
U3419 Pinion; Hard Alloy 48dp - 19T
U3420 Pinion; Hard Alloy 48dp - 20T
U3421 Pinion; Hard Alloy 48dp - 21T
U3422 Pinion; Hard Alloy 48dp - 22T
U3423 Pinion; Hard Alloy 48dp - 23T
U3424 Pinion; Hard Alloy 48dp - 24T
U3425 Pinion; Hard Alloy 48dp - 25T
U3426 Pinion; Hard Alloy 48dp - 26T
U3427 Pinion; Hard Alloy 48dp - 27T
U3428 Pinion; Hard Alloy 48dp - 28T
U3429 Pinion; Hard Alloy 48dp - 29T
U3430 Pinion; Hard Alloy 48dp - 30T
U3431 Pinion; Hard Alloy 48dp - 31T
U3432 Pinion; Hard Alloy 48dp - 32T
U3433 Pinion; Hard Alloy 48dp - 33T
U3434 Pinion; Hard Alloy 48dp - 34T
U3796 32T Steel Pinion - 48 D.P.
U3797 33T Steel Pinion - 48 D.P.
U3798 34T Steel Pinion - 48 D.P.
U3800 31T Steel Pinion - 48 D.P.

Wheels

U7597 Front Wheels White (pr) - TOP CAT
U7598 Rear Wheels White (pr) - TOP CAT
CR681 JC 5 Spoke 2.2 Rear White Wheel XLS
CR683 JC Dish 2.2 Rear White Wheel XLS
CR684 JC Spoke 2.2 Front Wheel - TOP CAT
CR685 JC Dish 2.2 Front Wheel - TOP CAT

Option Parts

CR290 1/12 Servo Saver 23T Sanwa/KO
CR291 1/12 Servo Saver 25T Futaba
U7243 Alloy Washer Carriers (pr) - CAT XLS
U7245 Alloy Eccentric (pr) - CAT XLS
U7315 Titanium Turnbuckle - 35mm - Silver - pr
U7316 Titanium Turnbuckle - 39mm - Silver - pr
U7317 Titanium Turnbuckle - 45mm - Silver - pr
U7419 Titanium M4 x 20 Grub Screw (pr)
U7424 Alloy Lightweight LiPo Nut - (pr)
U7600 Pro Transmission Conversion - TOP CAT
U7601 Pro Diff Pulley Set - TOP CAT
U7602 Pro Slipper Layshaft Set - TOP CAT
U7603 Pro Belt 47T 8.0 Wide - TOP CAT
U7604 Pro Transmission O'ring Set - TOP CAT
U7984 Alloy LiPo Posts Short pr KC,KD,LD/2,L1/EVO
U7985 Alloy LiPo Post Spacer-(4) KC,KD,LD/2,L1/EVO,ST
U8298 CF Front Shock Mount - Cougar Classic
U8299 Ball Raced Steering Set - Cougar Classic
U8302 C/F Rear Shock Mount - Cougar Classic



For the latest spares and option parts visit.....

www.racing-cars.com

TYRES, WHEELS & INSERTS

Full Spike 2" CAT

T652 - Yellow Compound (pr)

Rear Full Spike 2" CAT

T650 - Yellow Compound (pr)

Slim 2 Row Stud 2"

T654 - Yellow Compound (pr)

Block Rear Tyres 2"

T692 - Blue Compound (pr)
U6786 - Yellow Compound (pr)

Block Front Tyres 2"

T693 - Blue Compound (pr)
U6787 - Yellow Compound (pr)

4WD Front Mini Spike 2

U6515 - Green Compound (pr)
U6517 - Blue Compound (pr)
U6557 - Yellow Compound (pr)
U6762 - Silver Compound (pr)

Rear Mini Spike 2

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

Mini Spike 2 Slim

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

Stagger Rib Slim

U6592 - Yellow Compound (pr)

Full Spike Front 2.2"

U6595 - Yellow Compound (pr)

Full Spike Rear 2.2"

U6596 - Yellow Compound (pr)

Mini Pin Front 2.2"

U6601 - BlueCompound (pr)
U6607 - Yellow Compound (pr)
U6777 - Silver Compound (pr)

Mini Pin Rear 2.2"

U6608 - Yellow Compound (pr)

Mini Pin Slim 2.2"

U6609 - Yellow Compound (pr)
U6779 - Silver Compound (pr)

Cut Stagger Slim

U6759 - Yellow Compound (pr)
U6765 - Green Compound (pr)

Cut Stagger Low Profile

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

2WD 2 Row Stud 2.2"

U6797 - Yellow Compound (pr)

Mini Pin 2 Rear

U6803 - Blue Compound (pr)
U6804 - Yellow Compound (pr)
U6805 - Silver Compound (pr)

Wide Stagger Rib

U6810 - Yellow Compound (pr)
U6811 - Silver Compound (pr)
U6846 - Blue Compound (pr)

Mini Pin 1 Rear

U6817 - Yellow Compound (pr)
U6819 - Blue Compound (pr)
U6820 - Silver Compound (pr)

Mini Pin 2 Front

U6821 - Yellow Compound (pr)

Mini Dart Front 2WD

U6824 - Yellow Compound (pr)
U6827 - Blue Compound (pr)
U6830 - Silver Compound (pr)

Mini Dart Front 4WD

U6825 - Yellow Compound (pr)
U6828 - Blue Compound (pr)
U6831 - Silver Compound (pr)

Mini Dart Rear

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

Cactus Rear

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

Cactus Front

U6840 - Yellow Compound (pr)
U6843 - Silver Compound (pr)
U6845 - Blue Compound (pr)

Slim Rib Spike Front

U6847 - Yellow Compound (pr)
U6848 - Blue Compound (pr)

Mini Spike 2.0" Rear

U6849 - Yellow Compound (pr)

Cactus Fusion 4WD Front

U6855 - Yellow Compound (pr)
U6858 - Silver Compound (pr)

Honeycomb 2WD Front

U6859 - Yellow Compound (pr)

Honeycomb 4WD Front

U6861 - Yellow Compound (pr)

Honeycomb Rear

U6863 - Yellow Compound (pr)

Mezzo Rear

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

Mezzo Front 4WD

U6888 - Yellow Compound (pr)
U6889 - Silver Compound (pr)
U6890 - Blue Compound (pr)

Cactus Fusion 2 4WD Front

U6895 - Yellow Compound (pr)
U6896 - Blue Compound (pr)

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

Or visit **www.racing-cars.com** and check out:
Products > Wheels & Tyres.

Front Slim Inserts

U6738 - Medium (pr)
U6667 - Hard (pr)

Front Medium Inserts

U6733 - Medium (pr)
U6746 - Medium Tubby (pr)
U6652 - Hard (pr)

Rear Inserts

U6734 - Medium (pr)
U6747 - Medium Tubby (pr)
U6653 - Hard (pr)
U6668 - Soft Ultra Wide (pr)
U6669 - Hard Ultra wide (pr)

Wheels

U7181 - Rear Wheel Black (pair)
U7182 - Front Wheel Black (pair)
U7289 - White Rear Wheel (pair)
U7290 - White Front Wheel (pair)
U7597 - White Front Wheel TopCat (pair)
U7598 - White Rear Wheel TopCat (pair)
CR680 - JC 5 Spoke 2.2 Front White (pr)
CR681 - JC 5 Spoke 2.2 Rear White (pr)
CR682 - JC Dish 2.2 Front White (pr)
CR683 - JC Dish 2.2 Rear White (pr)

COUGAR Classic

Driver:	Kit Build	Date:	N/A	Event/Track:	N/A
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	Dry - Mild

TYRES

	FRONT	REAR
Tyres	T654	T650
Wheels	U7597	U7598
Inserts	U6667	U6652

Notes:

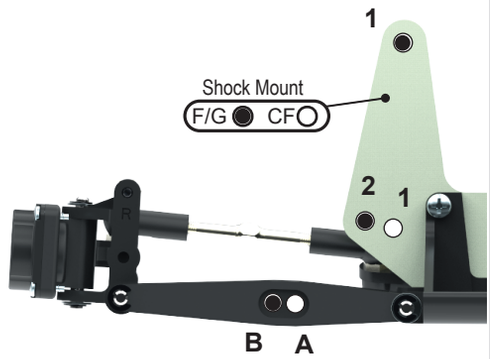
Notes:

FRONT SUSPENSION

KEY: **P** = Plastic, **A** = Alloy, **B** = Brass, **F/G** = Fibre Glass, **C/F** = 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	18 mm
Toe	1.0 deg In ☐ Out ■
Camber	-1.0 deg
Bump Steer Washers	0 mm
Ball Raced Steering	Y ☐ N ■

Notes:

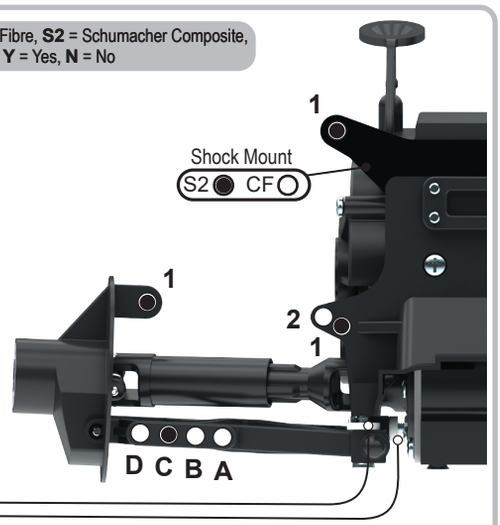


REAR SUSPENSION

KEY: **P** = Plastic, **A** = Alloy, **B** = Brass, **F/G** = Fibre Glass, **C/F** = 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	18 mm
Camber at Ride Height	-1.0 deg

Notes:



Anti Squat	1.6 mm
Rear Toe	2.0 mm

TRANSMISSION

Motor	HW 17.5t
Rotor Dia.	Std mm
Timing	Std deg
Pinion	30 t
Spur	86 t
TransUpgrade	Y ☐ N ■
Slipper Clutch	Y ☐ N ■

Notes:

CHASSIS

Running Weight	g

Notes:

EQUIPMENT

E.S.C.	
Servo	
RX	
LiPo	
Bodyshell	

WEIGHTS

Under LiPo	Y ☐ N ■

Notes:

SHOCKS

KEY: **i** = Internal, **e** = External

	FRONT	REAR
Oil	550 cSt	400 cSt
Piston	Standard	Standard
Spring	6 lb/in	4 lb/in
Limiters (i)	0 mm	6 mm
Stroke	10.6 mm	23.5 mm
Limiters (e)	11.4 mm	3.6 mm

Notes:

SET UP SHEET

Schumacher

COUGAR Classic

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:

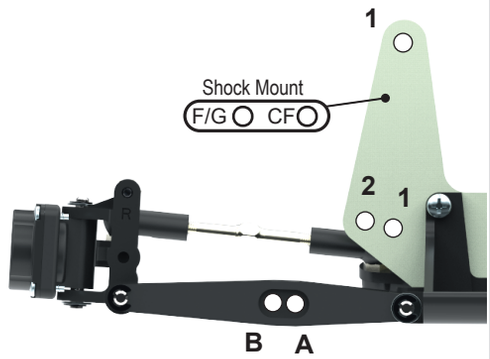
Notes:

FRONT SUSPENSION

KEY: **P** = Plastic, **A** = Alloy, **B** = Brass, **F/G** = Fibre Glass, **C/F** = 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
Toe		deg In ☐ Out ☐
Camber		deg
Bump Steer Washers		mm
Ball Raced Steering	Y ☐	N ☐

Notes:

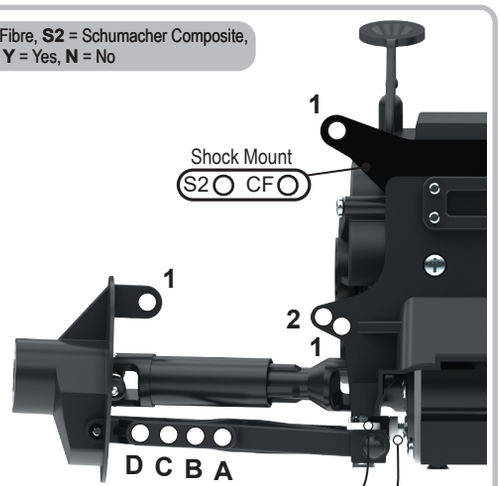


REAR SUSPENSION

KEY: **P** = Plastic, **A** = Alloy, **B** = Brass, **F/G** = Fibre Glass, **C/F** = 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
Camber at Ride Height		deg

Notes:



Anti Squat		mm
Rear Toe		mm

TRANSMISSION

Motor		
Rotor Dia.		mm
Timing		deg
Pinion		t
Spur		t
TransUpgrade	Y ☐	N ☐
Slipper Clutch	Y ☐	N ☐

Notes:

CHASSIS

Running Weight		g

Notes:

EQUIPMENT

E.S.C.	
Servo	
RX	
LiPo	
Bodyshell	

WEIGHTS

Under LiPo	Y ☐	N ☐

Notes:

SHOCKS

KEY: **i** = Internal, **e** = External

	FRONT	REAR
Oil	cSt	cSt
Piston		
Spring	lb/in	lb/in
Limiters (i)	mm	mm
Stroke	mm	mm
Limiters (e)	mm	mm

Notes: