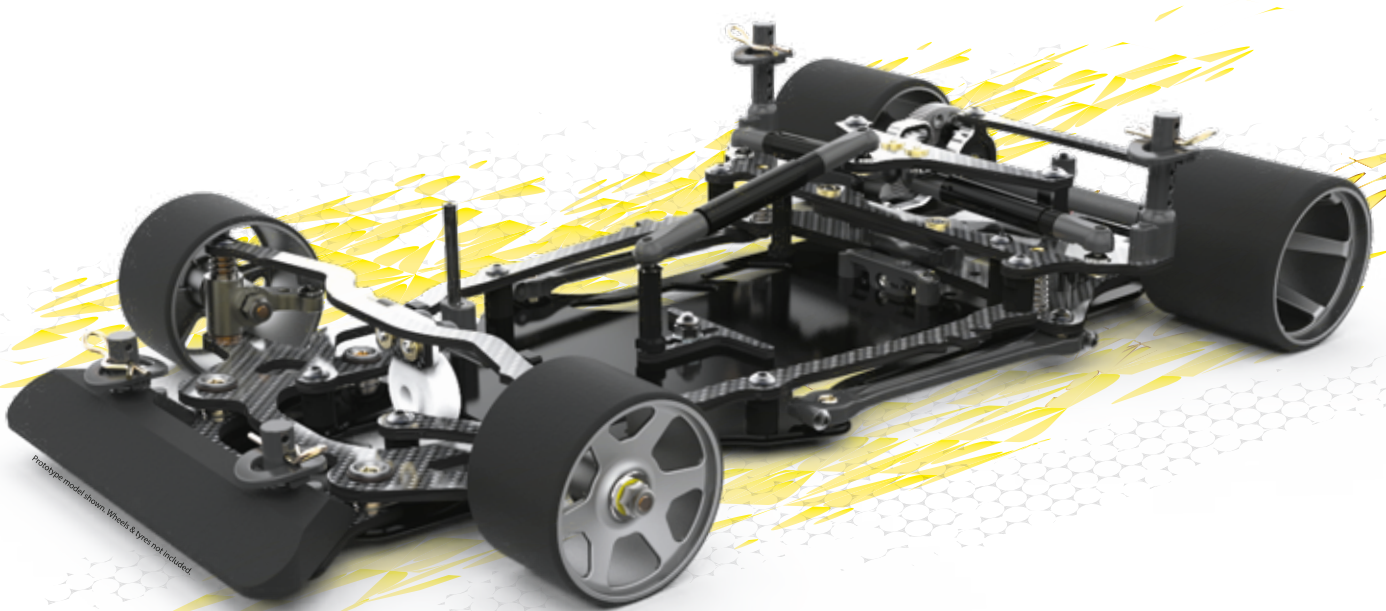


ECLIPSE 4

WORLD CLASS 1/12TH PRO LMP CHASSIS



Instruction Manual



Prototype model shown. Wheels & tires not included.



PERFORMANCE AND TECHNOLOGY

Schumacher

racing-cars.com

S1580_{ISS1}

Additional Items Required

Transmitter and Receiver



E.S.C



Servo



Motor



1S Li-Po Battery



Charger



Bodyshell



CORE RC Paint
CR600 to CR631
CR666 to CR672



CR522 CORE RC
Pro Tyre Glue + 2 Nozzles

Tyres



Soldering Iron
CR266 40w
CR275 80w

U3107 - Solder

AM701011 - Low Profile 4mm Connector 24K - pk2
AM701012 - Low Profile 5mm Connector 24K - pk2



CR288
CORE RC Silicone Wire Black 16 AWG - 1Mtr



AM190003 Reamer With End Cap For Lexan Body

U4229 Steel Spanner - 5.5mm/3.9mm



CR044 Curved Body Scissors



AM150155 Nut Driver 5.5 (M3)
AM150170 Nut Driver 7.0 (M4)



AM110115 Allen Wrench 1.5
AM110120 Allen Wrench 2.0
AM110125 Allen Wrench 2.5
AM110130 Allen Wrench 3.0

ECLIPSE4

WORLD CLASS 1/12TH PRO LMP CHASSIS

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

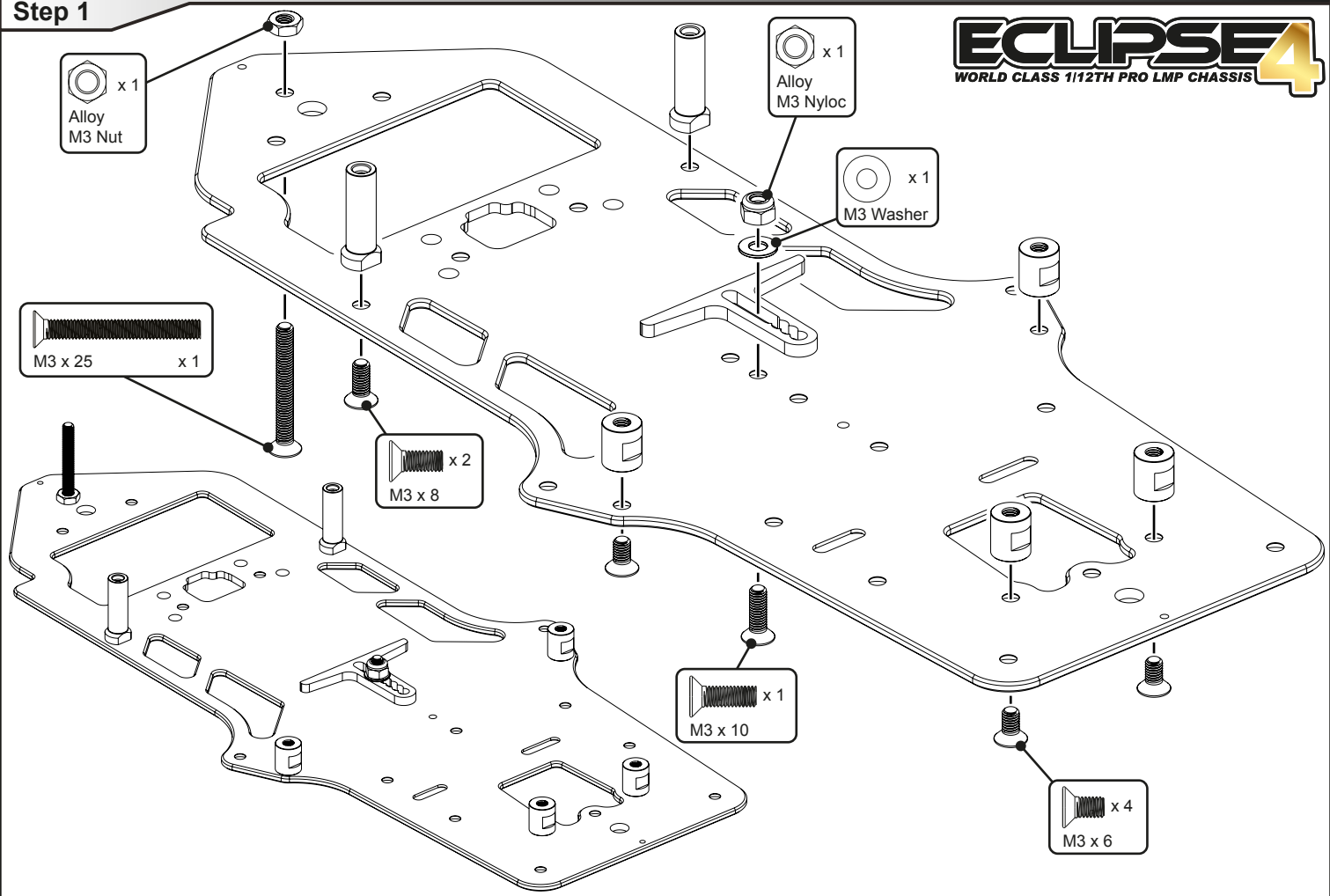
PLEASE NOTE THAT SOME OF THE PRODUCT RANGES BELOW ARE ONLY AVAILABLE IN THE UNITED KINGDOM.



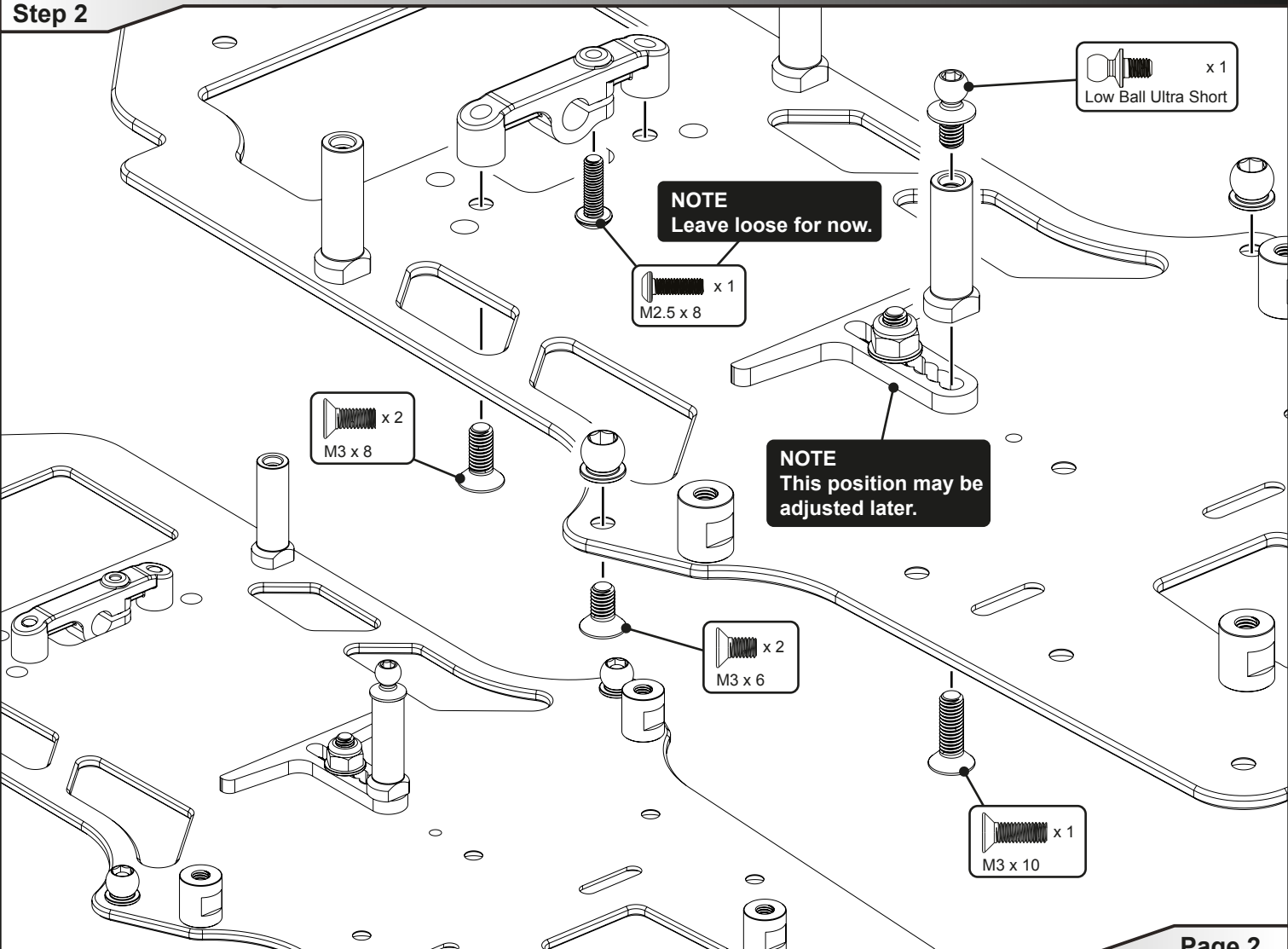
IMPORTANT SAFETY NOTES

- 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.

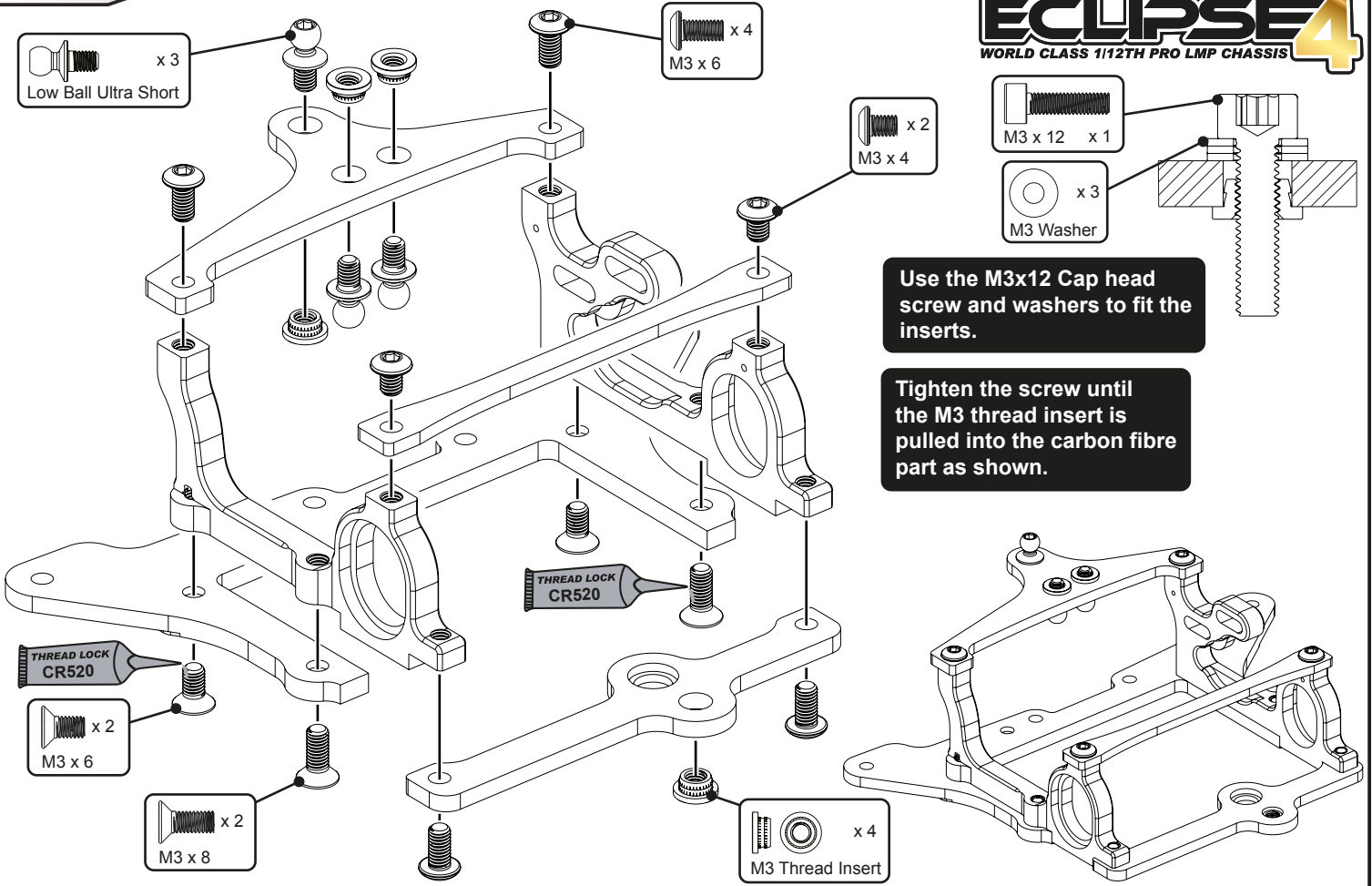
Step 1



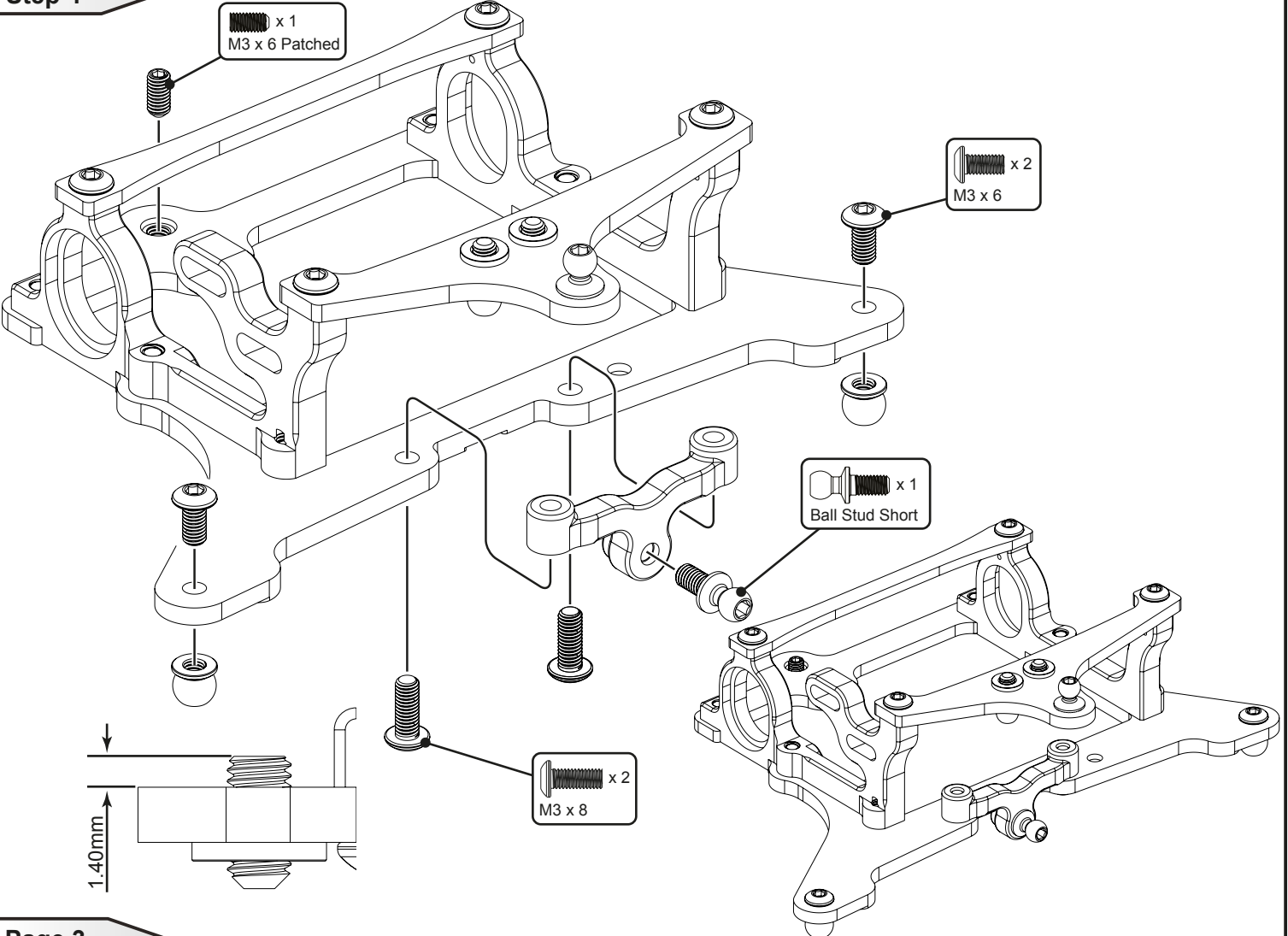
Step 2



Step 3



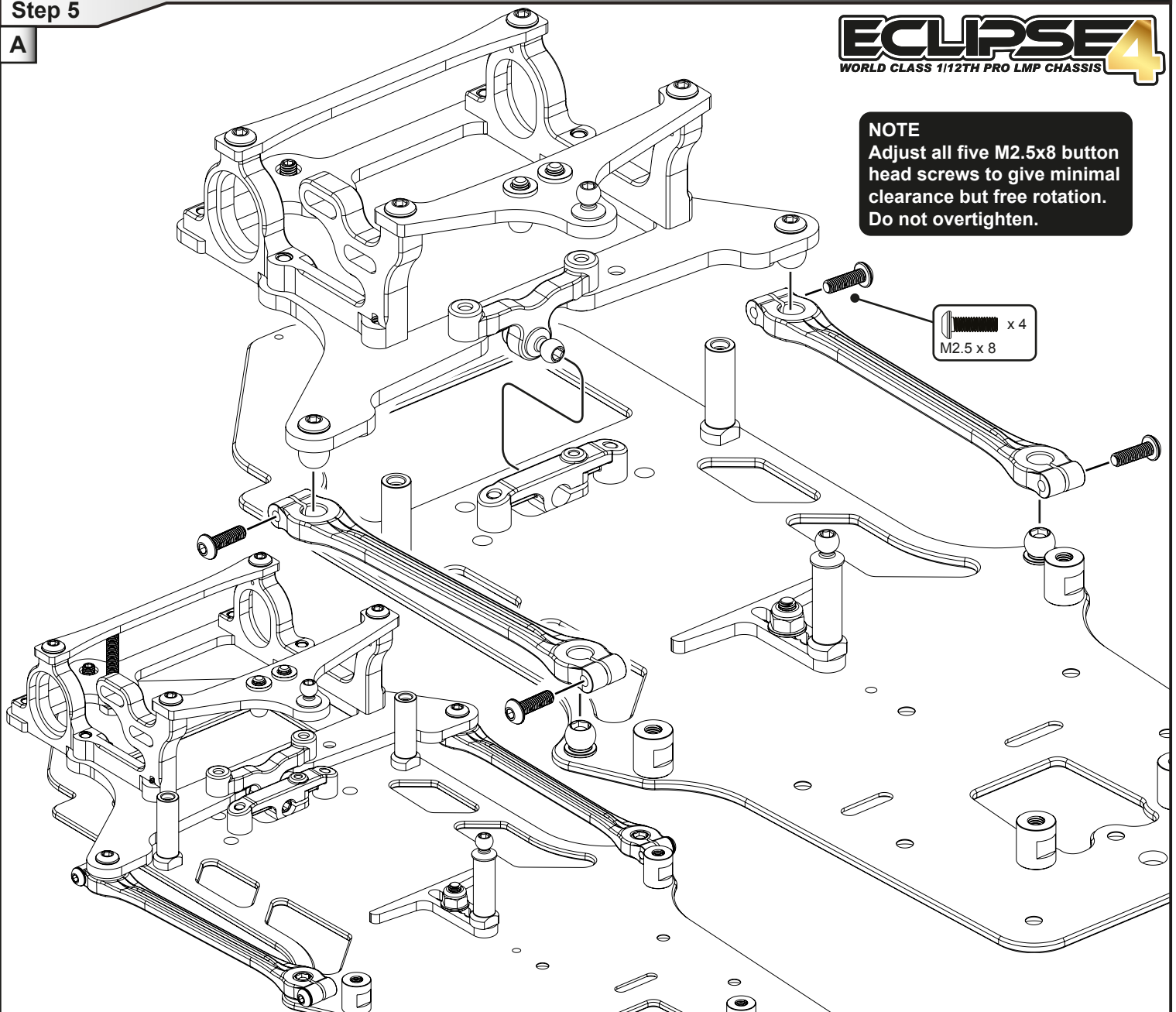
Step 4



Step 5

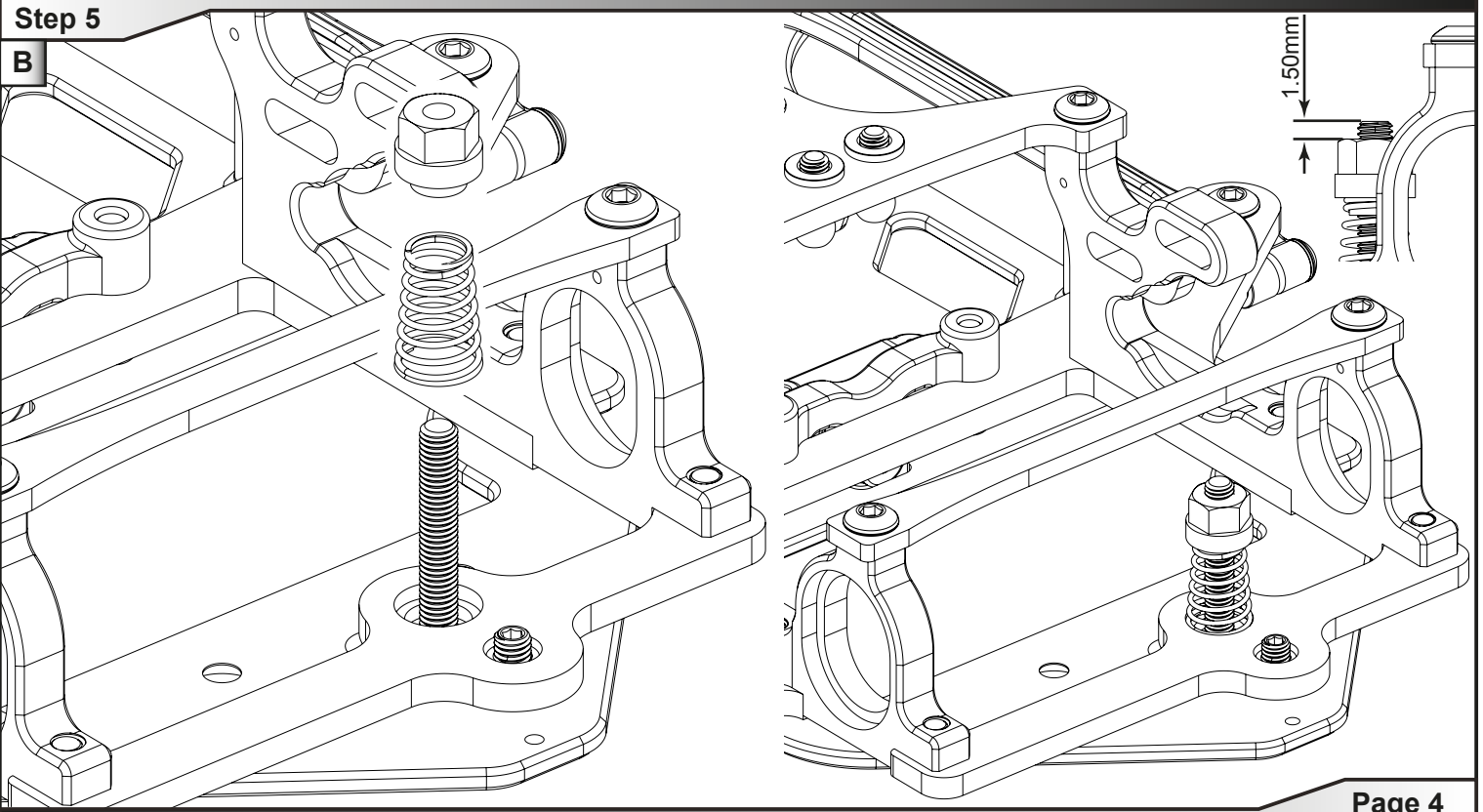
A

NOTE
Adjust all five M2.5x8 button head screws to give minimal clearance but free rotation. Do not overtighten.



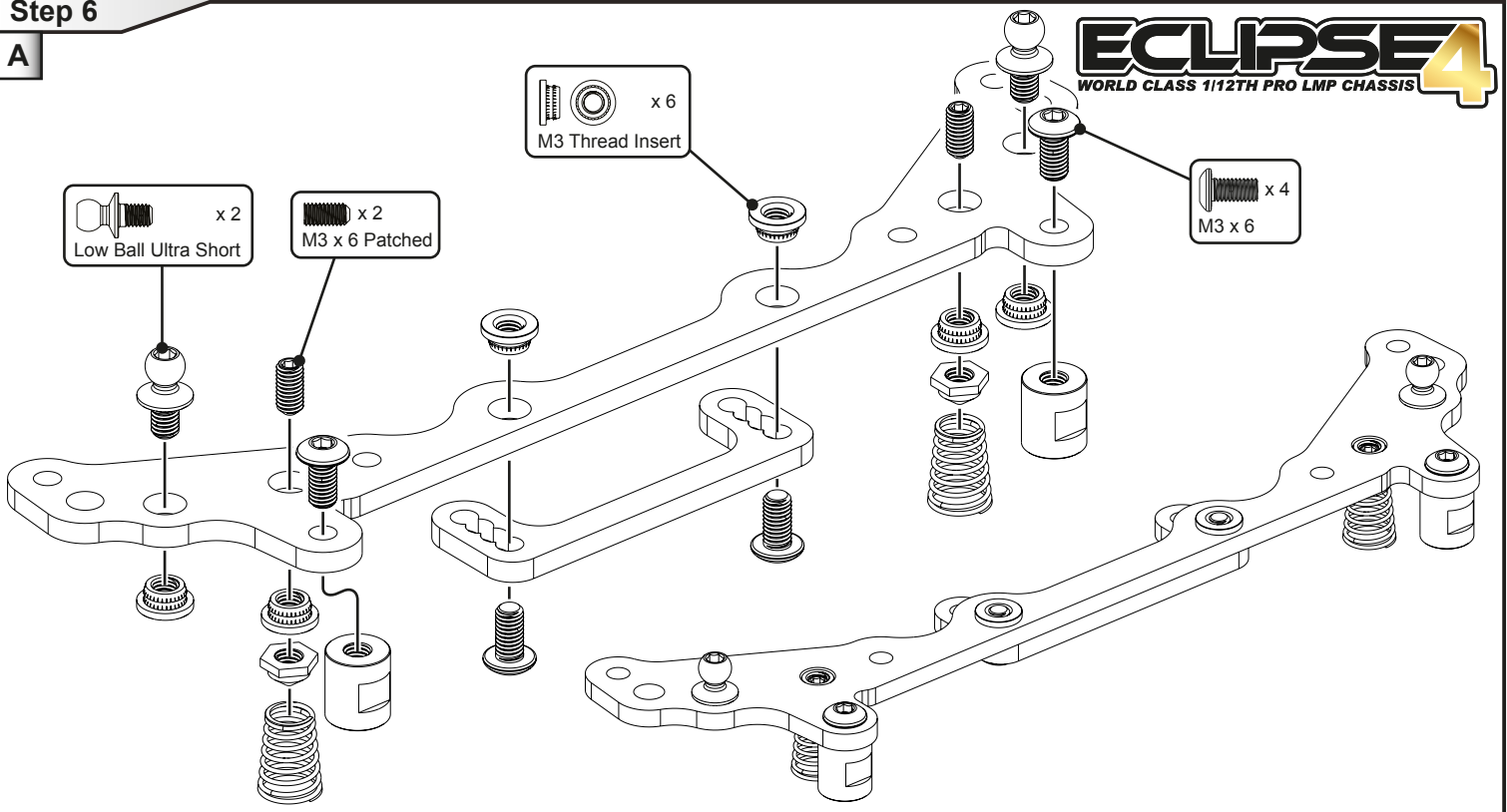
Step 5

B



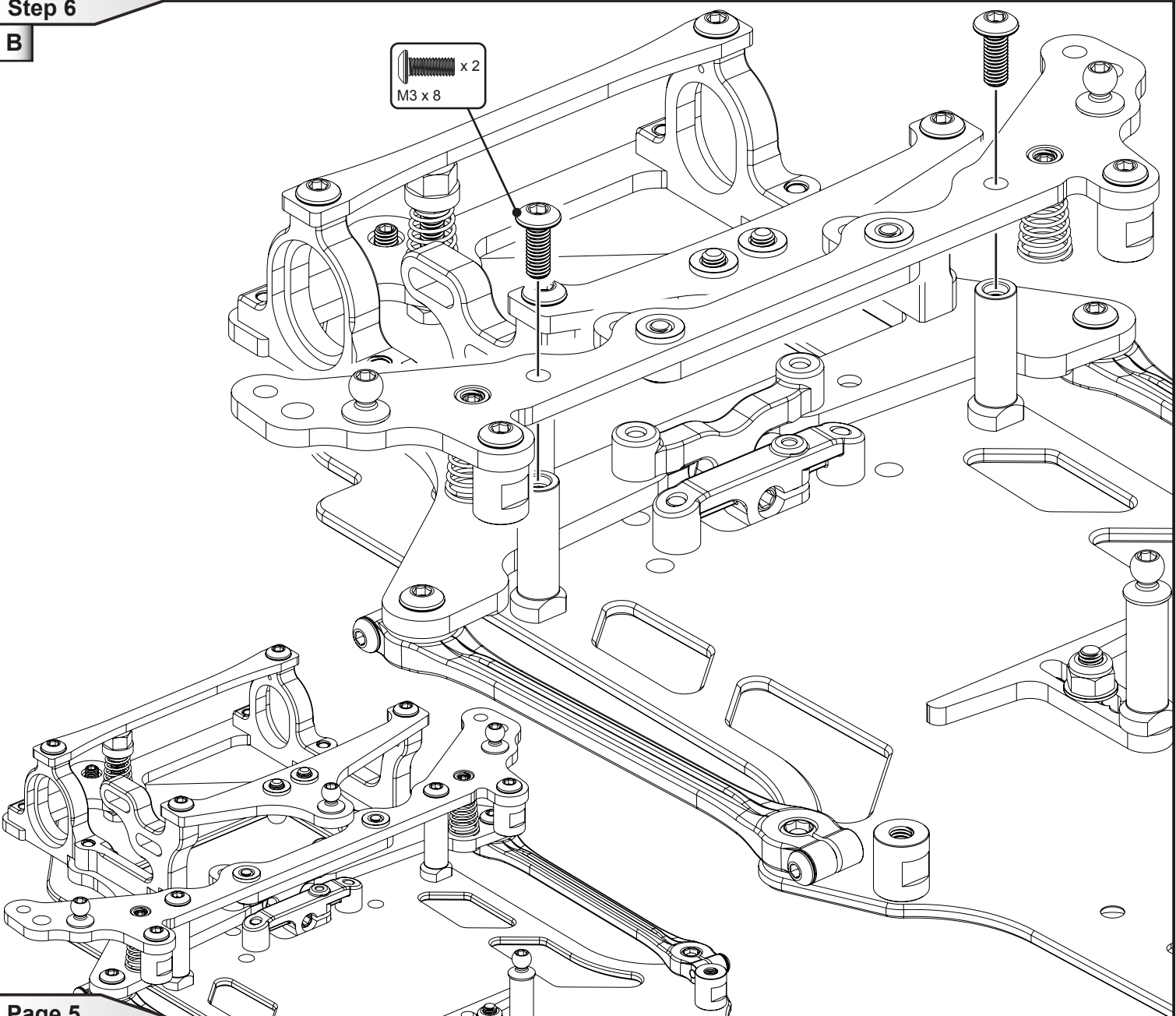
Step 6

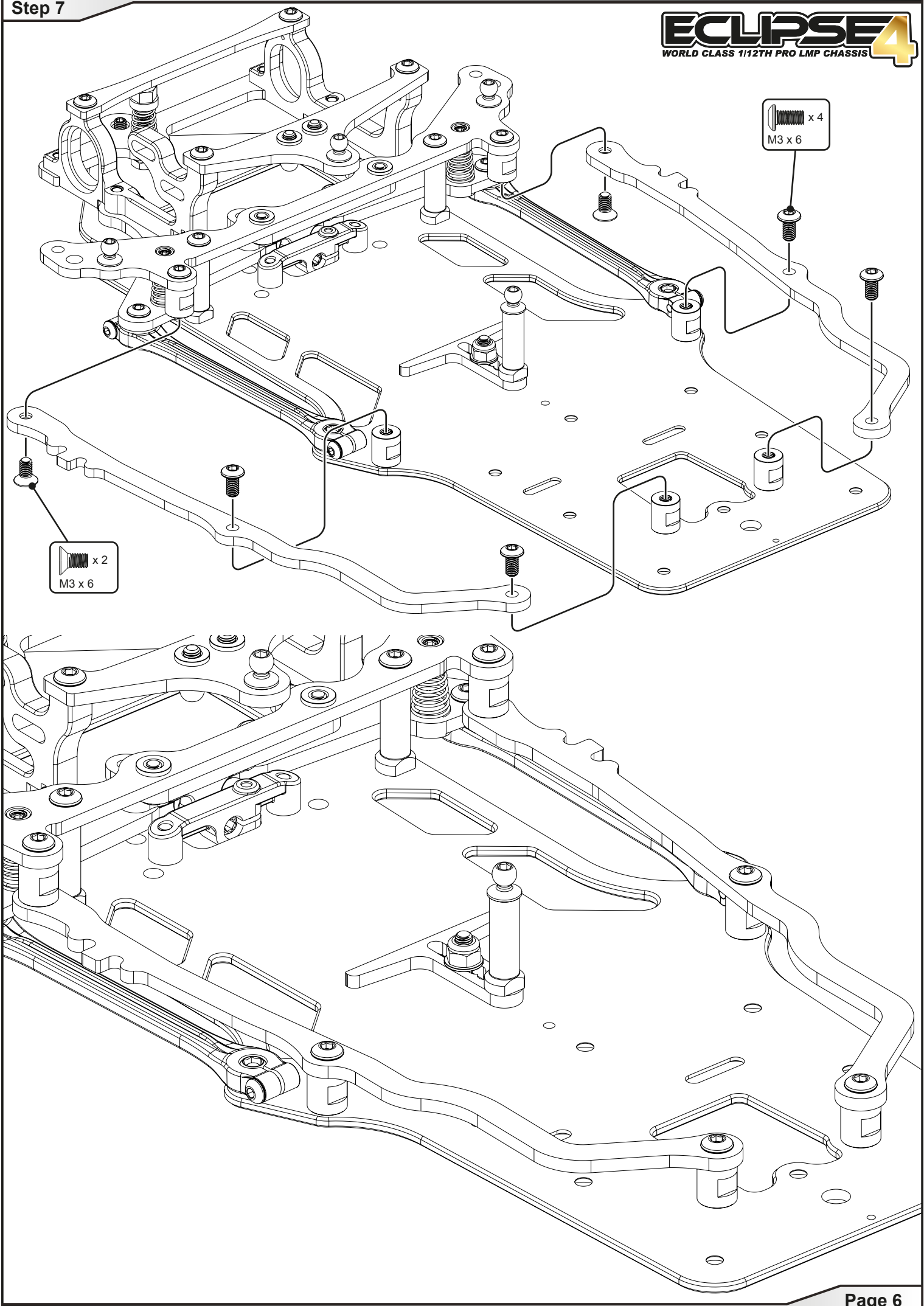
A



Step 6

B



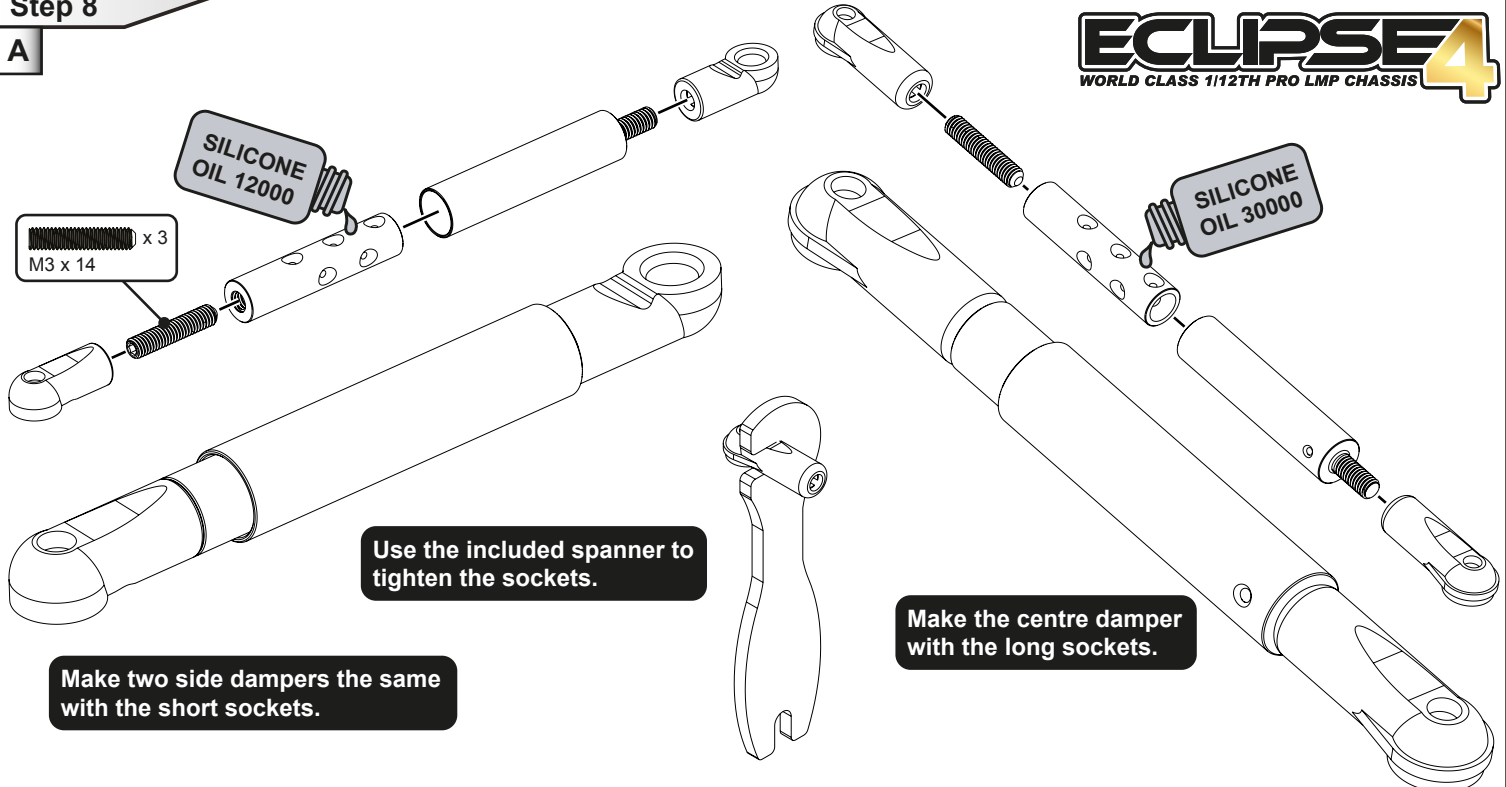


x 4
M3 x 6

x 2
M3 x 6

Step 8

A



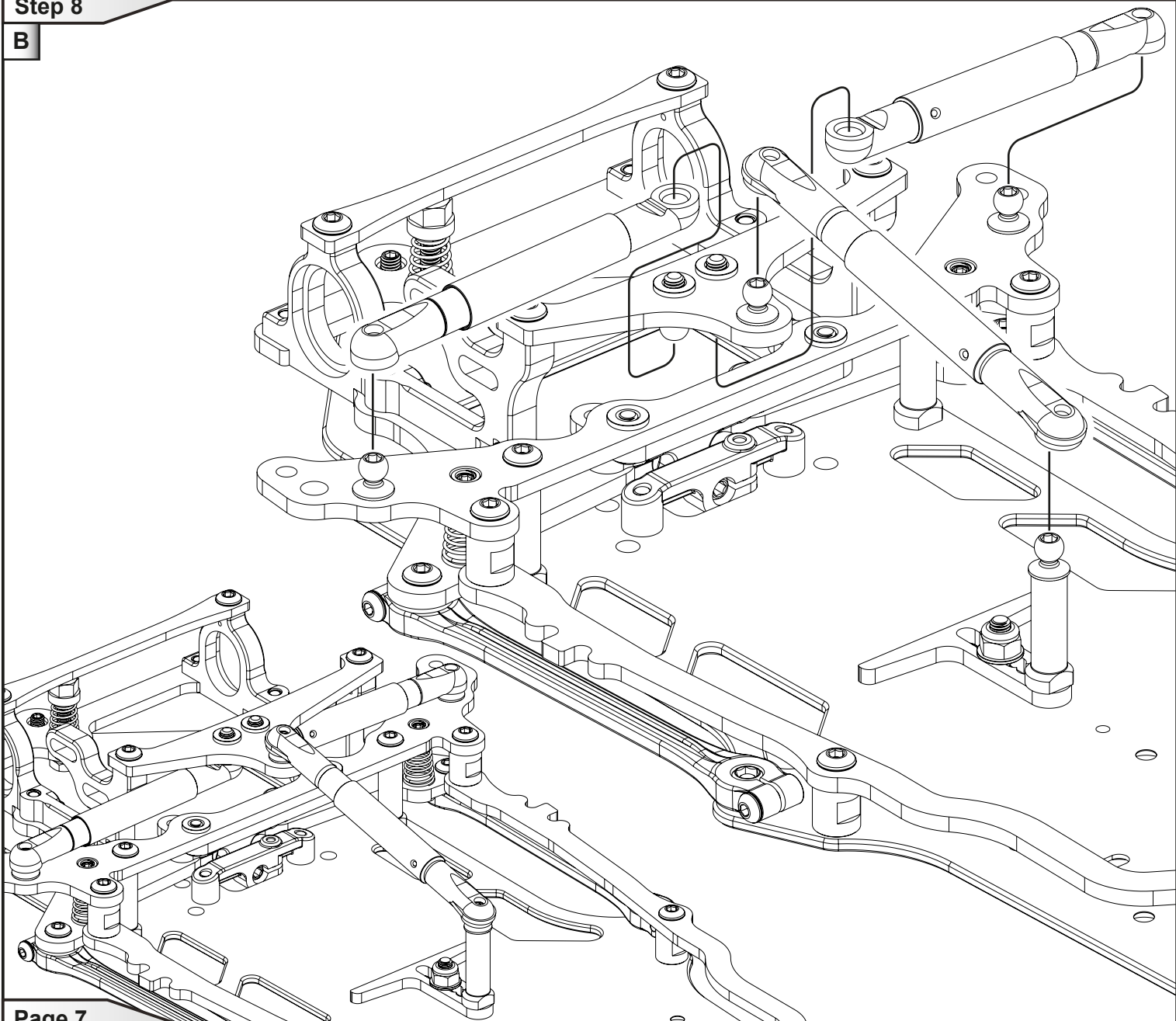
Use the included spanner to tighten the sockets.

Make the centre damper with the long sockets.

Make two side dampers the same with the short sockets.

Step 8

B

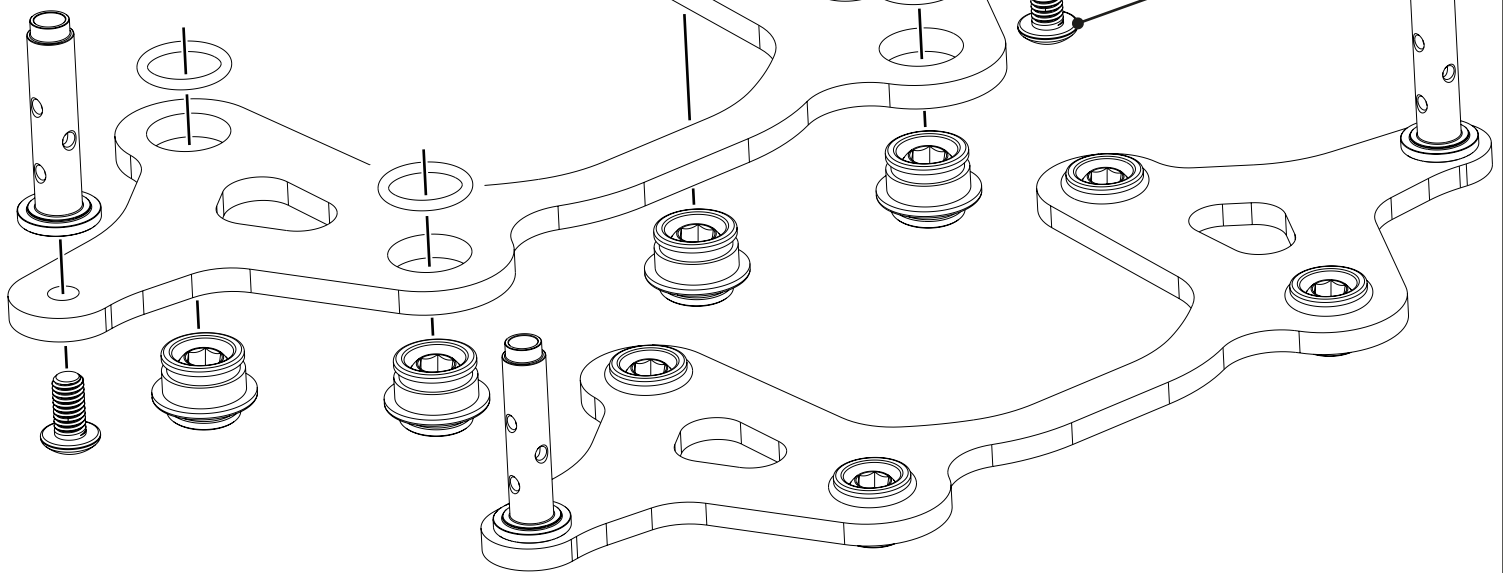


Step 9

Be careful to ensure the o-rings are fully seated and concentric.

O-ring x 4

x 2
M3 x 6

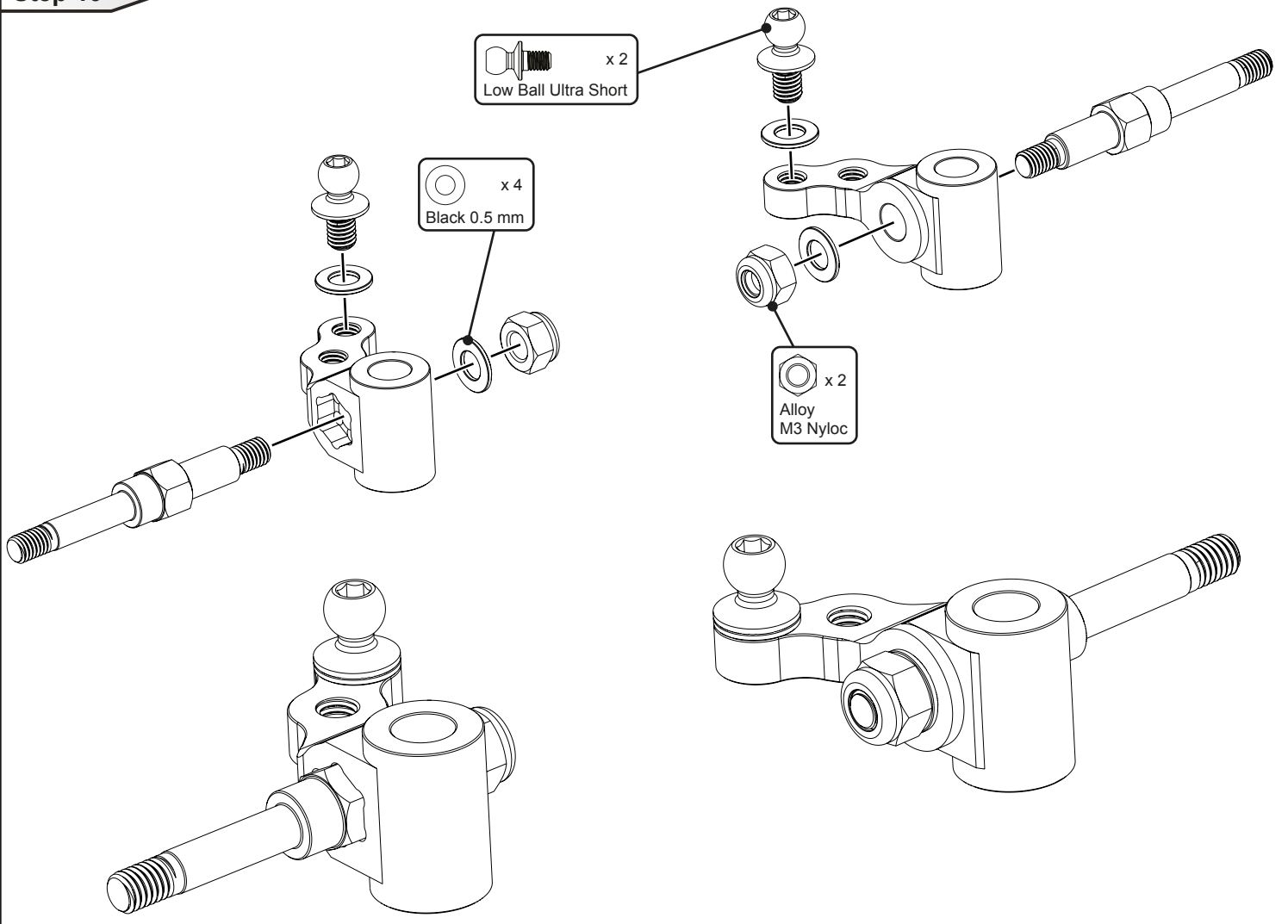


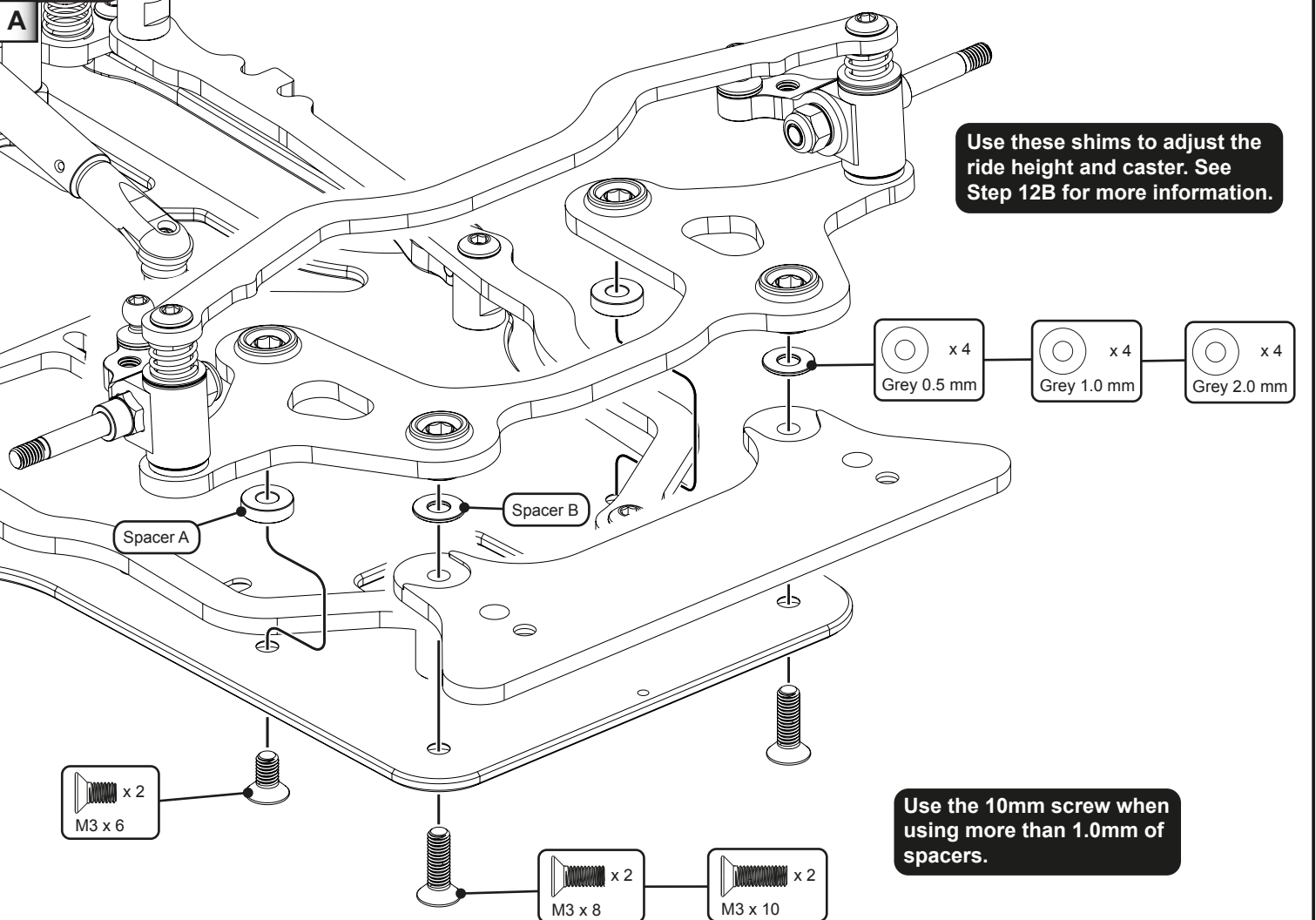
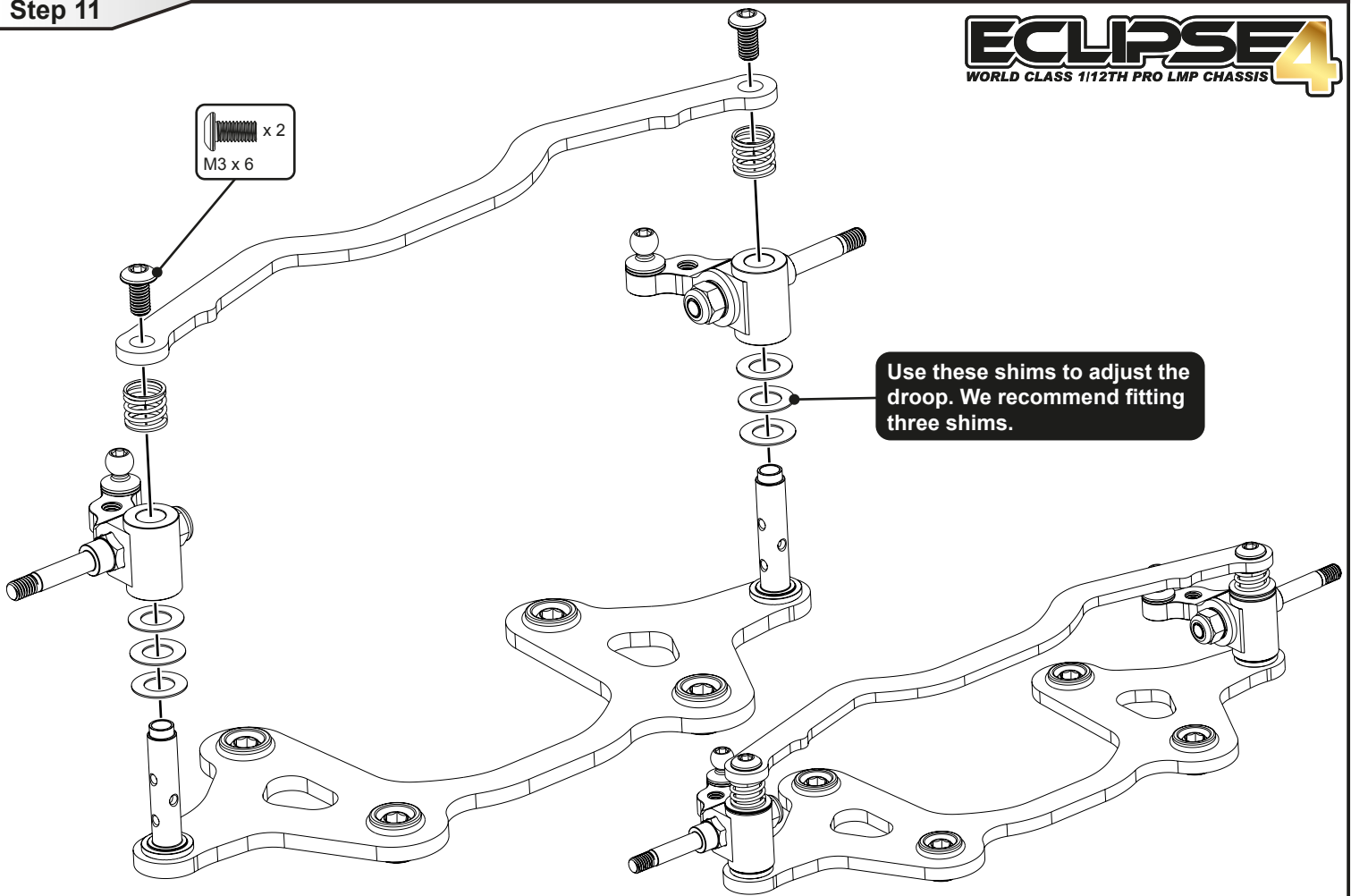
Step 10

x 2
Low Ball Ultra Short

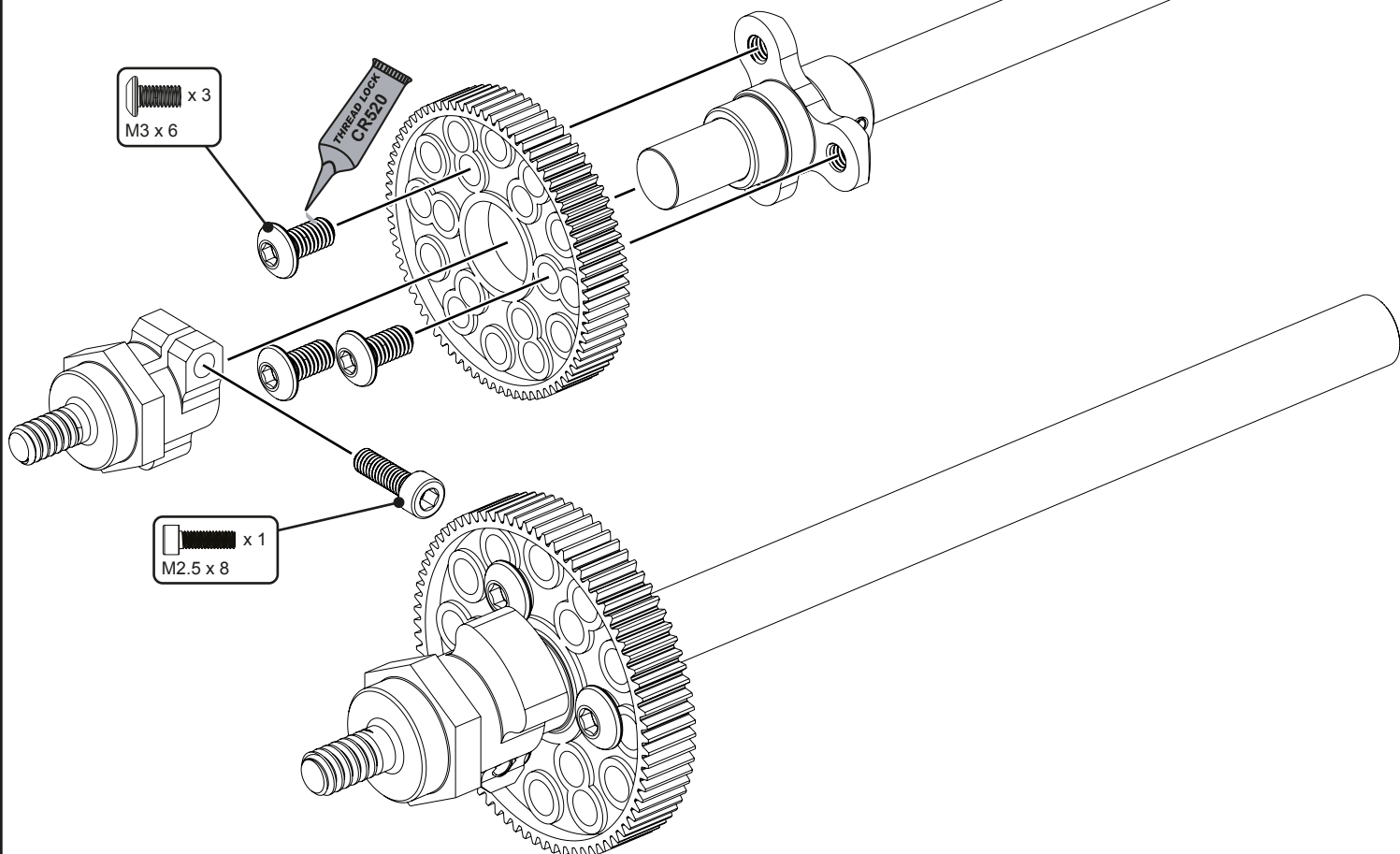
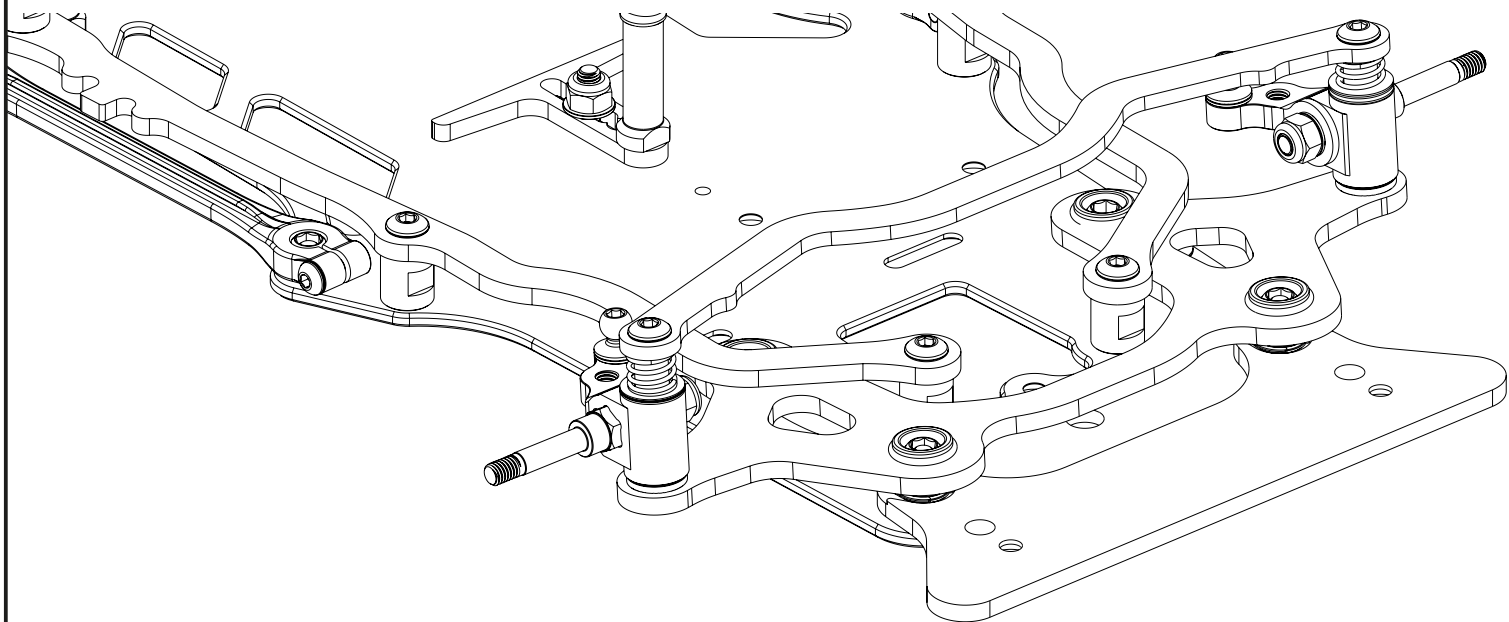
x 4
Black 0.5 mm

x 2
Alloy
M3 Nyloc

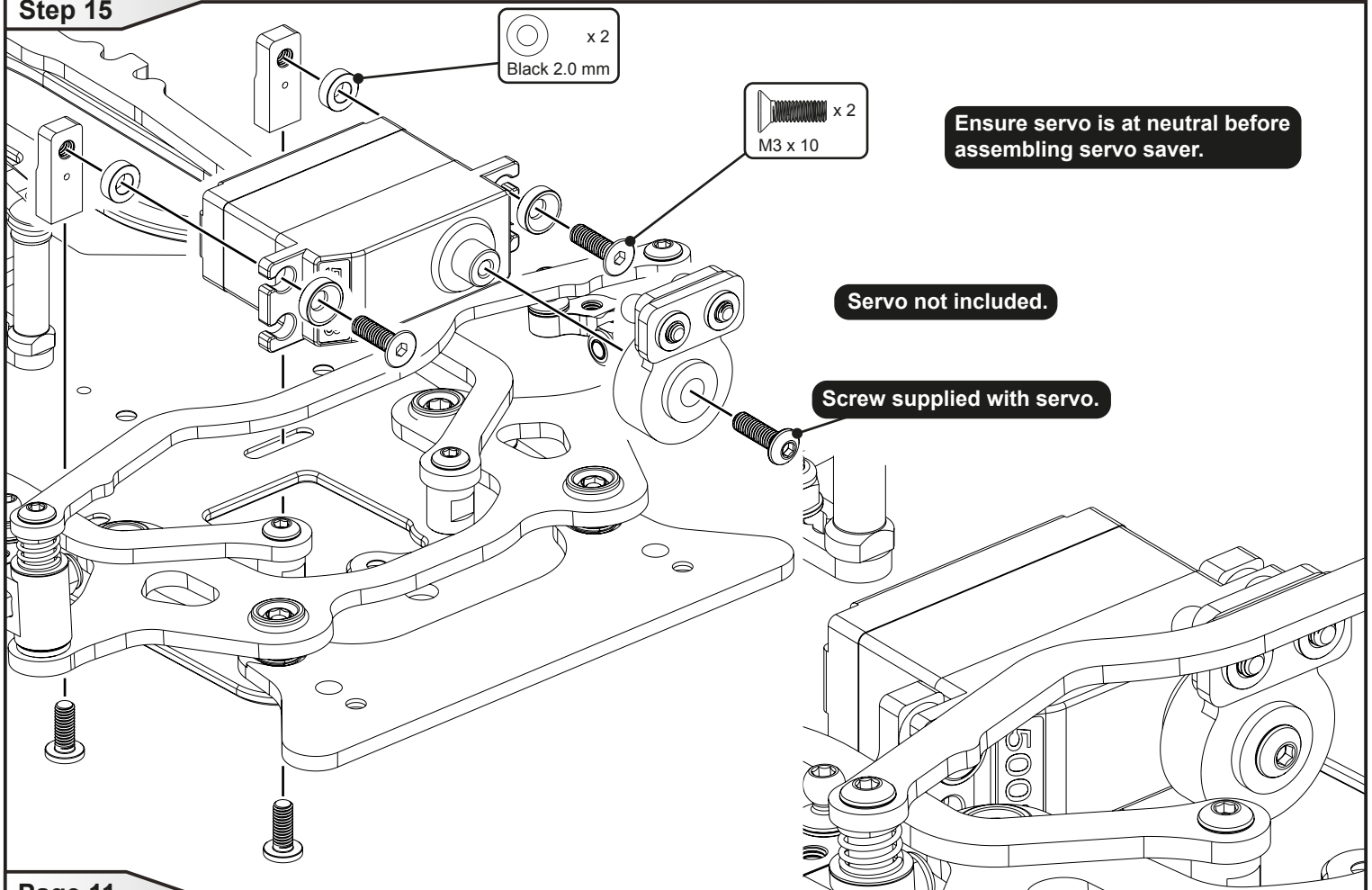
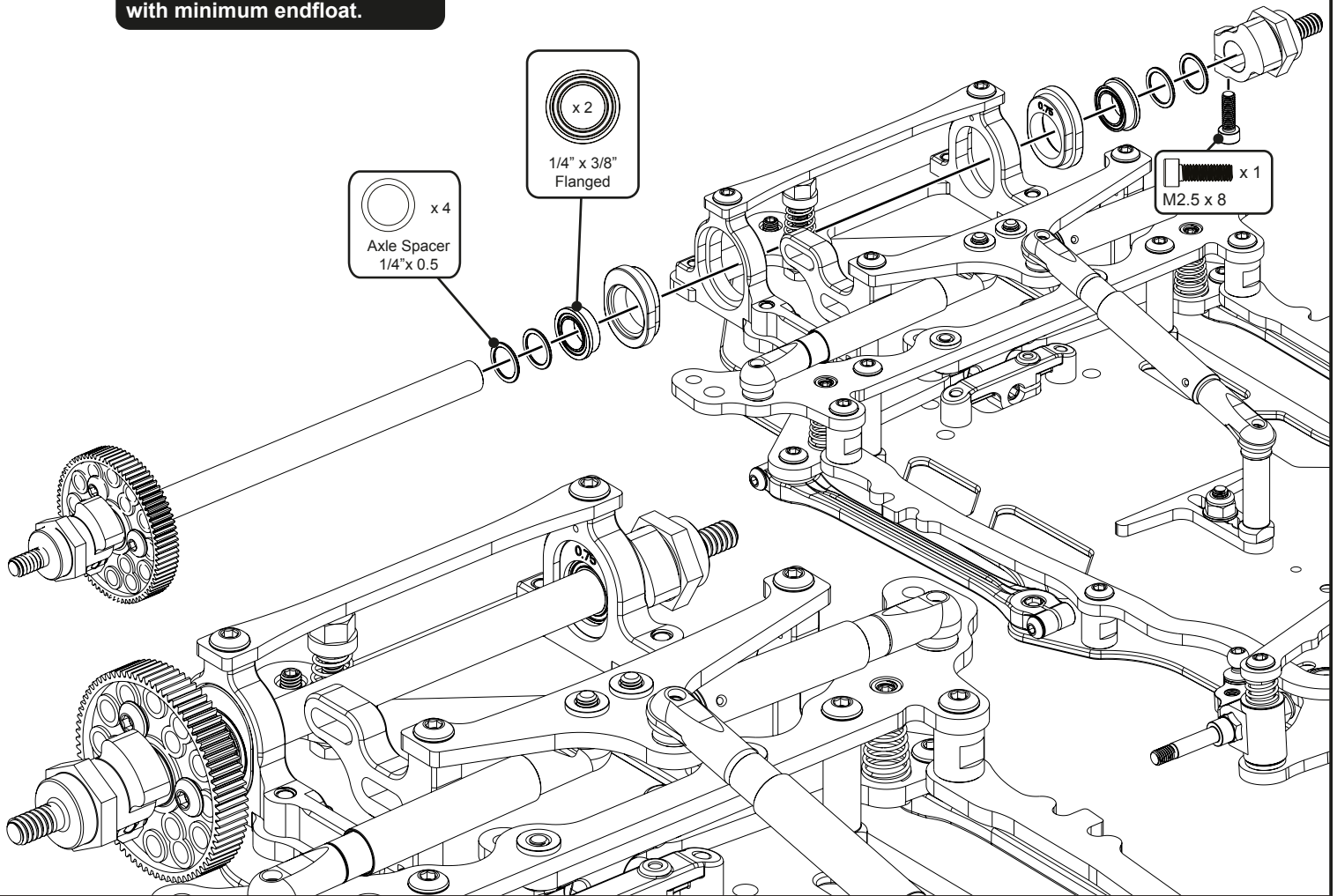




Ride Height and Caster Chart				
Tyre Size (mm)	Ride Height (mm)	Caster	Spacer A (mm)	Spacer B (mm)
39.5	3.00	3°	0.00	0.00
41.5	3.00	3°	1.00	1.00
43.5	3.00	3°	2.00	2.00
39.5	3.00	4°	0.00	0.50
41.5	3.00	4°	1.00	1.50
43.5	3.00	4°	2.00	2.50
39.5	3.00	5°	0.00	1.00
41.5	3.00	5°	1.00	2.00
43.5	3.00	5°	2.00	3.00



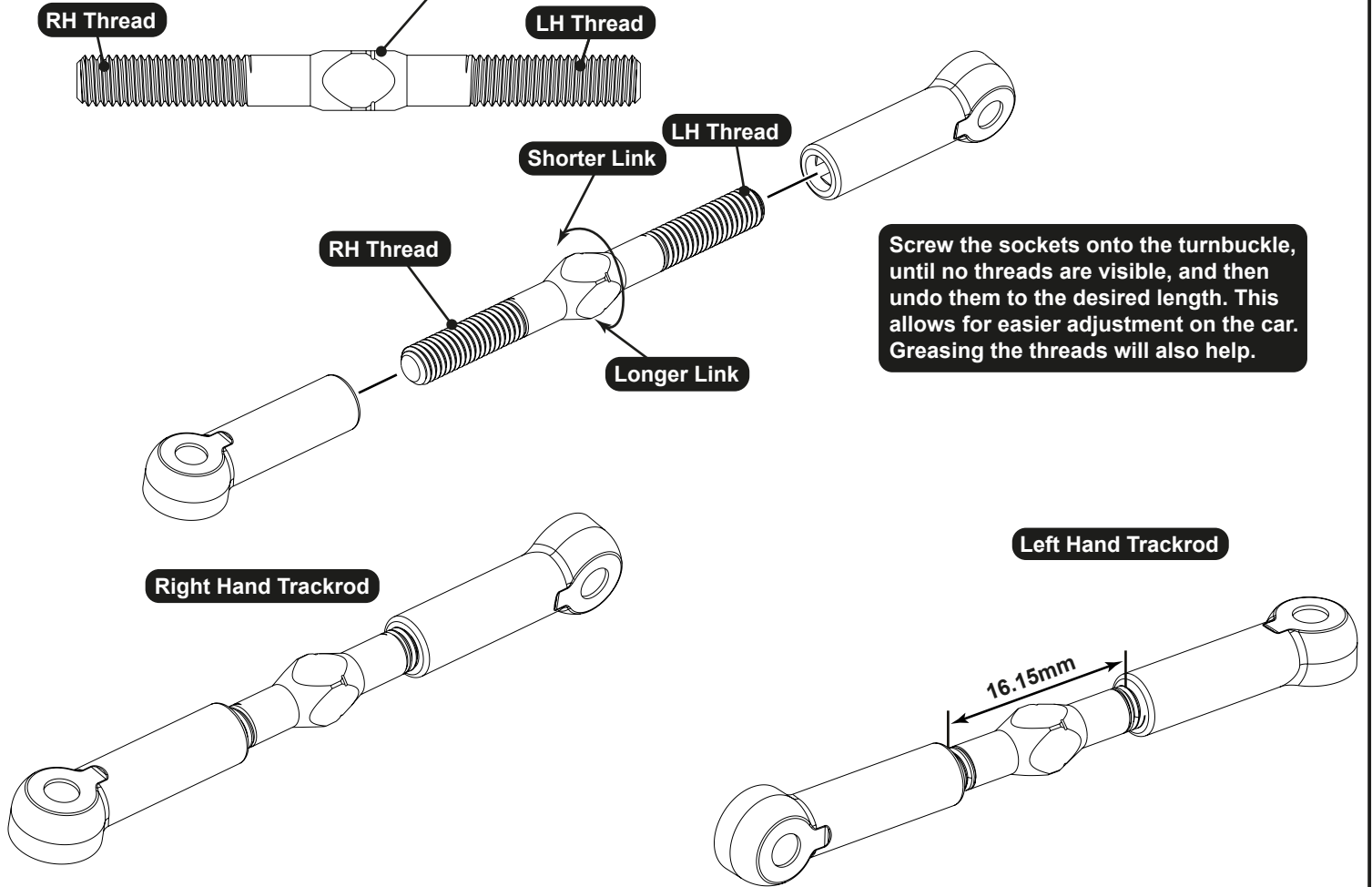
Ensure the spool rotates freely with minimum endfloat.



Step 16

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

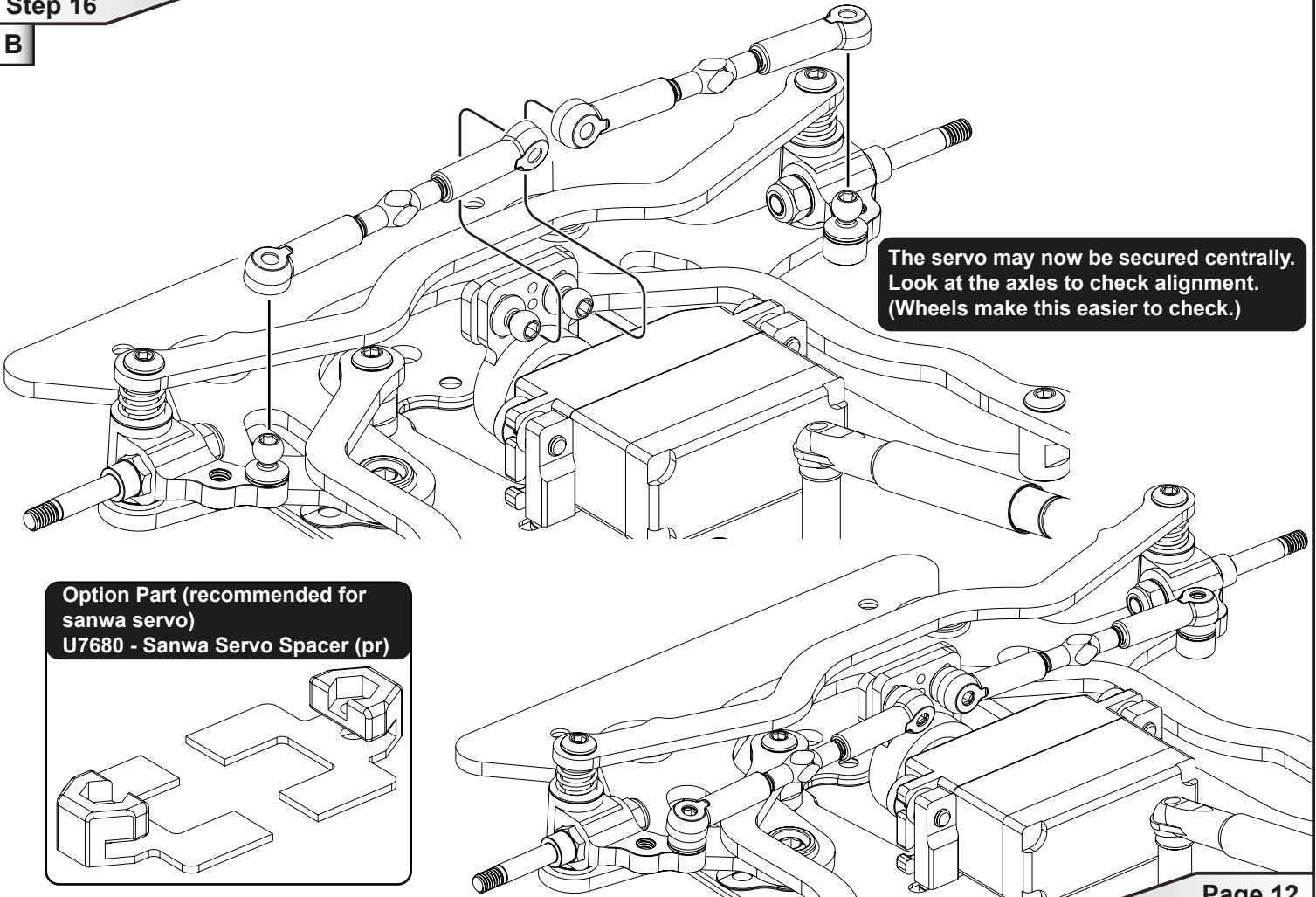
A



Screw the sockets onto the turnbuckle, until no threads are visible, and then undo them to the desired length. This allows for easier adjustment on the car. Greasing the threads will also help.

Step 16

B



The servo may now be secured centrally. Look at the axles to check alignment. (Wheels make this easier to check.)

Option Part (recommended for sanwa servo)
U7680 - Sanwa Servo Spacer (pr)

Electric - Off Road Cars

K192 Eclipse 4 - 1/12th Circuit - Kit

Chassis Parts

U119 Aerial Tube - Pack 4
U4627 Chassis Post Long - SS GT/At/Ecl
U4773 Aerial Mount - CAT K2
U4950 Body Posts - Eclipse (4pcs)
U4964 C/F - Pod Rear Brace - Eclipse
U7486 Alloy Servo Mounts - Eclipse 2
U7885 LiPo 'O' Ring - Atom 2 (pr)
U7895 25T Servo Saver Assembly - Atom 2
U7896 23T Servo Saver Assembly - Atom 2
U7913 C/F Rear Lipo Stop - Atom 2
U7917 C/F Rear Spring Hanger - Atom 2
U7930 C/F Bumper Mount - Eclipse 3
U7931 Foam Bumper - Eclipse 3
U7935 C/F Camber Strap 1.5 Deg - Eclipse 3
U7938 Chassis Post 8mm - Eclipse 3 (pr)
U8140 C/F Front Beam - Eclipse 4
U8141 C/F Pod Base - Eclipse 4
U8142 C/F Multi Mount - Eclipse 4
U8143 C/F Damper Mount - Eclipse 4
U8144 C/F Front LiPo Stop - Eclipse 4
U8145 C/F Top Decks 2.5mm - Eclipse 4 (pr)
U8149 Alloy Chassis - Eclipse 4
U8150 King Pin - Eclipse 4 (pr)
U8154 Manual - Eclipse 4

Bodyshells and Decals

MT014001 Montech M12 Body 1/12th carpet
MT016014 Montech M16 Body 1/12th carpet
MT018013 Montech M18 Carpet Body
MT018013L Montech M18 Carpet Body Light Weight
MT019016 Montech M20 - 1/12 Clear Body Standard
MT019016L Montech M20 - 1/12 Clear Body La Leggera
TB60025 Bomber LMP Body Type Ketter - Light Weight
TB60027 Bomber LMP Body Type Ketter - Ultra Light
U8155 Decals - Eclipse 4

Suspension

U4254 Ball Grippa Sockets Pro - Mi5 - pk8
U4274 Pro Ball Stud Short - pk4
U4302 Ball Socket Short (Black) - Mi5 - pk4
U4814 Front Axle - Atom
U4847 Rear Spring Seat - At/Ecl
U4851 Side Spring Seat (pr) - Atom/Eclipse
U4865 Kingpin Shim Set - Atom
U4968 Ball Sockets Low Profile -Eclipse - pk4
U7315 Titanium Turnbuckle - 35mm - Silver - pr
U7787 Shock Top Ball Dia 5.5mm - Mi7 (pk4)
U7832 Ball Stud Low (Ultra Short) (pk4)
U7871 Pivot Mouldings - Atom 2
U7872 Side Link - Atom 2 (pr)
U7933 Alloy Hub Carrier - Eclipse 3 (pr)
U8087 Alloy Damper Body - Icon
U8088 Damper Rod - Icon
U8156 Pivot Ball - Eclipse 4 (pk4)

Transmission

CR515 Kimbrough - Spur Gear 76T - 64DP - #199
U4972 Ride Height Adjusters- 0.00, 0.50, 1.00, 1.50 4prs
U4973 Ride Height Adjusters- 0.25, 0.75, 1.25, 1.75 4prs
U7483 Trans Housing LH - Eclipse 2
U7484 Trans Housing RH - Eclipse 2
U7899 Diff Spacer Set - Atom 2
U8151 C/F Spool Axle - Eclipse 4
U8152 Alloy Hex Wheel Clamp - Eclipse 4

Bearings and Balls

U4980 Ball Bearing - 1/4x3/8x1/8 Flanged Shielded - (pr)
U4981 Ball Bearing-1/8x5/16 Flanged Yellow -(pr)

Springs

U4838 Rear Springs Black - Soft - At/Ecl - pr
U4839 Rear Springs Silver - Med/Soft - At/Ecl - pr
U4840 Rear Springs Gold -Med/Hard - At/Ecl - pr
U4841 Rear Springs Nickel - Hard - At/Ecl - pr
U4842 Front Springs Black - Soft - Atom (pr)
U4843 Front Springs Silver - Medium - Atom (pr)
U4844 Front Springs Gold - Hard - Atom (pr)
U4845 Spring Tuning Set Front - Atom
U4846 Spring Tuning Set Rear - At/Ecl
U7322 Rear Spring Red Dot-Hard/Ultra-Atom/Eclipse-pr
U7323 Rear Spring Black - Ultra - Atom/Eclipse - pr
U7489 Front Springs White - Ultra - Atom/Eclipse 2 (pr)
U8130 Front Spring Red Dot - Eclipse 3 (pr)
U8131 Front Spring Green Dot - Eclipse 3 (pr)

Hardware

U1552 SPEED PACK - R Clips
U1606 SPEED PACK - Servo Tape - 30pk
U2812 M4 Nyloc Wheel Nut - Black Alloy (pk4)
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
U4155 SPEED PACK - M3 Csk Washers - Black Alloy (pk10)
U4156 SPEED PACK - M2.5 x 8 Cap SS (4 pcs)
U4210 SPEED PACK - Pinion Grub Screw Set pk10
U4241 SPEED PACK - M3 Alloy Nyloc Nuts - Black - pk10
U4862 Black Alloy Washers 0.50mm (pk12)
U4983 SPEED PACK Servo Screws (2pcs)
U4984 SPEED PACK M3 Alloy Nuts - Black - pk10
U4987 SPEED PACK Needle Roller 1.5x11.8 (pk8)
U7102 SPEED PACK - M3x4 Button Hd (pk10)
U7103 SPEED PACK - M3x6 Button Hd (pk10)
U7104 SPEED PACK - M3x8 Button Hd (pk10)
U7105 SPEED PACK - M3x10 Button Hd (pk10)
U7113 SPEED PACK - M3x10 Cap Hd (pk10)
U7125 SPEED PACK - M3x25 Csk Hd (pk10)
U7689 M3 Brass Inserts - pk10
U7707 M3 Steel Washers (pk10)
U7710 M3 Black Alloy Washers 1.00mm (pk10)
U7711 M3 Black Alloy Washers 2.00mm (pk10)
U7743 M2.5 X 8 Button Screws (pk10)
U7884 M3x6 Grub Screw Dome End (pk4)
U8133 6 x 1 'O'ring (pk10)

Option Parts

AM364090	Super Diff Gear 64P 90T
AM364092	Super Diff Gear 64P 92T
AM364094	Super Diff Gear 64P 94T
AM364096	Super Diff Gear 64P 96T
AM364098	Super Diff Gear 64P 98T
AM364100	Super Diff Gear 64P 100T
AM364102	Super Diff Gear 64P 102T
AM364104	Super Diff Gear 64P 104T
AM364106	Super Diff Gear 64P 106T
AM364108	Super Diff Gear 64P 108T
AM364110	Super Diff Gear 64P 110T
AM364112	Super Diff Gear 64P 112T
AM364114	Super Diff Gear 64P 114T
AM364116	Super Diff Gear 64P 116T
CR280	Ti Pro Ball Studs - Short - (pr)
CR310	Alloy Csk Hex Screws M3 x 6 pk10
CR311	Alloy Csk Hex Screws M3 x 8 pk10
CR312	Alloy Csk Hex Screws M3 x 10 pk10
CR313	Alloy Csk Hex Screws M3 x 12 pk10
CR314	Alloy Button Head Hex Screws M3 x 6 pk10
CR315	Alloy Button Head Hex Screws M3 x 8 pk10
CR316	Alloy Button Head Hex Screws M3 x 10 pk10
CR320	Titanium Csk Hex Screws M3 x 6 pk10
CR321	Titanium Csk Hex Screws M3 x 8 pk10
CR322	Titanium Csk Hex Screws M3 x 10 pk10
CR327	Titanium Button Head Hex Screws M3 x 6 pk10
CR328	Titanium Button Head Hex Screws M3 x 8 pk10
CR329	Titanium Button Head Hex Screws M3 x 10 pk10
CR509	Kimbrough - Thin Pro/Gear 88T - 64DP-#709
CR513	Kimbrough - Spur Gear 78T - 64DP - #202
CR664	Alloy Motor Spacer - 1mm - pk2
J016	Contact Truer Arbour & Clamp - 1/12hex
U1954	Pro - Thrust Bearing
U2135	M4 Nyloc Wheel Nut - Purple Alloy (pk4)
U2810	M4 Nyloc Wheel Nut - Red Alloy (pk4)
U2811	M4 Nyloc Wheel Nut - Blue Alloy (pk4)
U3582	Precision Balance Pivot Set
U4112	S/Steel Shims 1/4x5/16x0.004-SS/At/Ecl
U4328	Impact Servo Saver
U4650	M3 Nyloc Nut Steel - Black
U4808	1/8" Chrome Steel Ball -At/Ecl - pk12
U4809	Ball Bearing - 1/4x3/8x1/8 Shield - (pr)
U4811	1/8" Silicone Nitride Ball (pk12)
U4837	SPEED PACK M2.5x10 Cap Hd (pk8)
U4855	Diff Washer - Atom/Eclipse - pr
U4861	Diff Rebuild Kit - Atom/Eclipse
U4970	C/F Rear Axle - Eclipse
U4974	LH Wheel Clamp - Eclipse
U4975	RH Washer Carrier - Eclipse
U7298	Alloy Rear Wheel Screws - Atom/Eclipse (pk6)
U7453	30/40mm Fan Mount Kit - ATOM
U7680	Sanwa Servo Spacer - Eclipse 2 (pr)
U7690	Pro Ball Bearings 1/4 x 3/8 x 1/8 FI Shielded
U7691	Pro Ball Bearings 1/8 x 5/16 x 9/64 FI Shielded
U7709	M3 Black Alloy Washers 0.75mm (pk10)
U7712	M3 Black Alloy Washers 3.00mm (pk10)
U7774	M3 Alloy Washer Black 1.5 mm (pk10)
U7825	Titanium Pivot Ball 5.5mm Low (pr)
U7828	Titanium Ball Stud Low (Ultra Short) (pk4)

Option Parts Cont....

U7883	Steel Diff Axle - Atom 2
U7897	Alloy Pivot Spacer 1mm - Atom 2 (pr)
U7918	Alloy Pivot Mount - Atom 2
U7919	Alloy Pivot Block - Atom 2
U7934	C/F Camber Strap 1.0 Deg - Eclipse 3
U7936	Titanium King Pin - Eclipse 3 (pr)
U7937	Titanium Front Axle - Eclipse 3 (pr)
U7940	C/F Chassis - Eclipse 3
U7943	Alloy Spacer Clip 0.5mm (pk4)
U7944	Alloy Spacer Clip 0.75mm (pk4)
U8065	M3 Alloy Thread Inserts - pk8
U8119	Servo Screw 10mm (pr)
U8126	Mass Damper Shaft
U8128	Mass Damper Weight 23g
U8129	Mass Damper Weight 12g
U8137	Mass Damper Set
U8139	C/F Top Deck 2.0mm - Eclipse 4 (pr)
U8146	Alloy Fan Mount - Eclipse 4 (pr)
U8153	Ride Height Shim 0.20mm - Eclipse 4 (pk4)
U8171	Eclipse 4 Ball Diff Set

Pinions

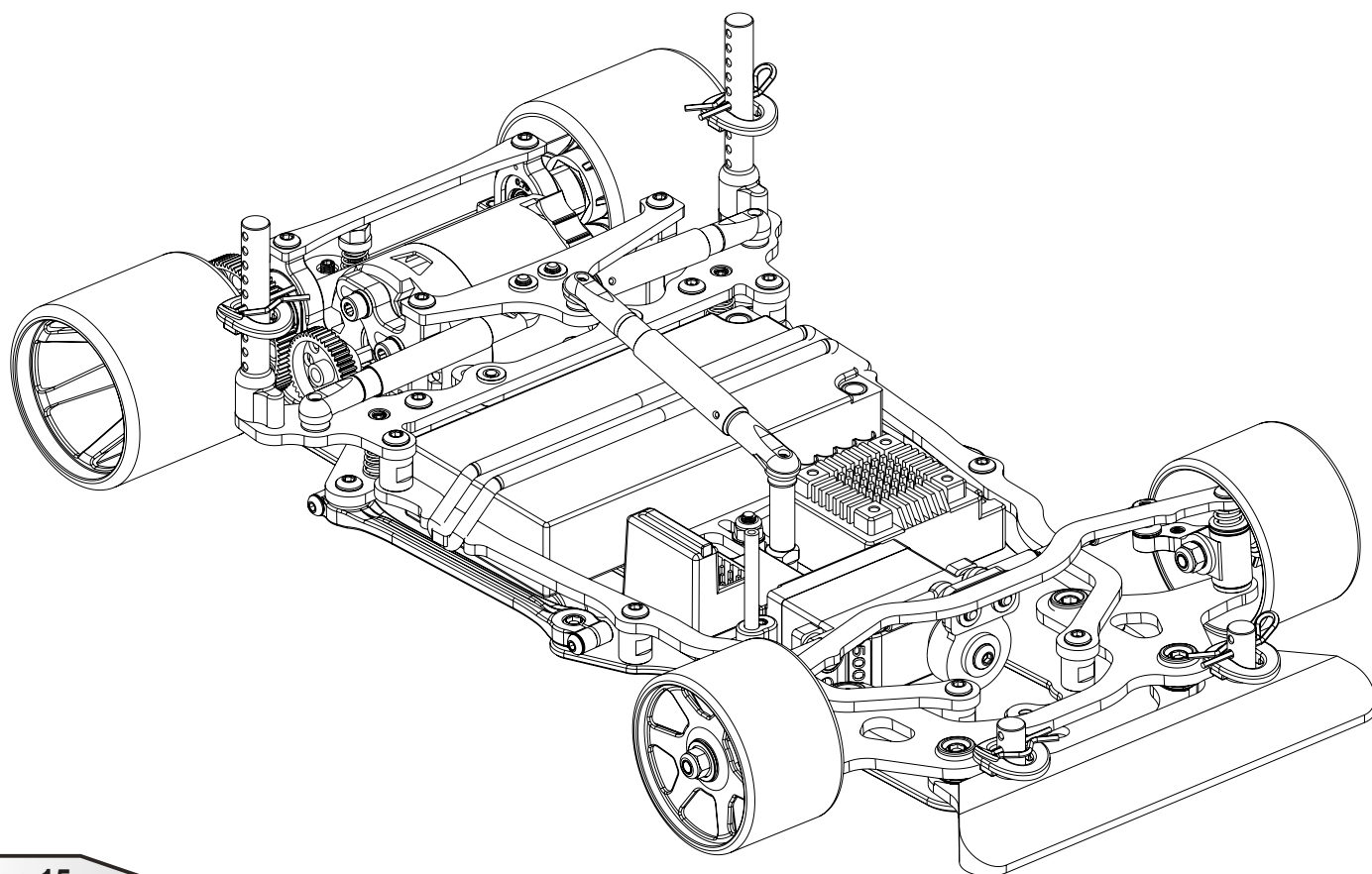
CR6418	Pinion Gear 64DP 18T (7075 Hard)
CR6419	Pinion Gear 64DP 19T (7075 Hard)
CR6420	Pinion Gear 64DP 20T (7075 Hard)
CR6421	Pinion Gear 64DP 21T (7075 Hard)
CR6422	Pinion Gear 64DP 22T (7075 Hard)
CR6423	Pinion Gear 64DP 23T (7075 Hard)
CR6424	Pinion Gear 64DP 24T (7075 Hard)
CR6425	Pinion Gear 64DP 25T (7075 Hard)
CR6426	Pinion Gear 64DP 26T (7075 Hard)
CR6427	Pinion Gear 64DP 27T (7075 Hard)
CR6428	Pinion Gear 64DP 28T (7075 Hard)
CR6429	Pinion Gear 64DP 29T (7075 Hard)
CR6430	Pinion Gear 64DP 30T (7075 Hard)
CR6431	Pinion Gear 64DP 31T (7075 Hard)
CR6432	Pinion Gear 64DP 32T (7075 Hard)
CR6433	Pinion Gear 64DP 33T (7075 Hard)
CR6434	Pinion Gear 64DP 34T (7075 Hard)
CR6435	Pinion Gear 64DP 35T (7075 Hard)
CR6436	Pinion Gear 64DP 36T (7075 Hard)
CR6437	Pinion Gear 64DP 37T (7075 Hard)
CR6438	Pinion Gear 64DP 38T (7075 Hard)
CR6439	Pinion Gear 64DP 39T (7075 Hard)
CR6440	Pinion Gear 64DP 40T (7075 Hard)
CR6441	Pinion Gear 64DP 41T (7075 Hard)
CR6442	Pinion Gear 64DP 42T (7075 Hard)
CR6443	Pinion Gear 64DP 43T (7075 Hard)
CR6444	Pinion Gear 64DP 44T (7075 Hard)
CR6445	Pinion Gear 64DP 45T (7075 Hard)

Pinions Cont....

CR6446	Pinion Gear 64DP 46T (7075 Hard)
CR6447	Pinion Gear 64DP 47T (7075 Hard)
CR6448	Pinion Gear 64DP 48T (7075 Hard)
CR6449	Pinion Gear 64DP 49T (7075 Hard)
CR6450	Pinion Gear 64DP 50T (7075 Hard)
CR6451	Pinion Gear 64DP 51T (7075 Hard)
CR6452	Pinion Gear 64DP 52T (7075 Hard)
CR6453	Pinion Gear 64DP 53T (7075 Hard)
CR6454	Pinion Gear 64DP 54T (7075 Hard)
CR6455	Pinion Gear 64DP 55T (7075 Hard)
CR6456	Pinion Gear 64DP 56T (7075 Hard)
CR6457	Pinion Gear 64DP 57T (7075 Hard)
CR6458	Pinion Gear 64DP 58T (7075 Hard)
CR6459	Pinion Gear 64DP 59T (7075 Hard)
CR6460	Pinion Gear 64DP 60T (7075 Hard)
CR6461	Pinion Gear 64DP 61T (7075 Hard)
CR6462	Pinion Gear 64DP 62T (7075 Hard)
U3619	Pinion; Hard Alloy 64dp - 19T
U3620	Pinion; Hard Alloy 64dp - 20T
U3621	Pinion; Hard Alloy 64dp - 21T
U3622	Pinion; Hard Alloy 64dp - 22T
U3623	Pinion; Hard Alloy 64dp - 23T
U3624	Pinion; Hard Alloy 64dp - 24T
U3625	Pinion; Hard Alloy 64dp - 25T
U3626	Pinion; Hard Alloy 64dp - 26T

Pinions Cont....

U3627	Pinion; Hard Alloy 64dp - 27T
U3628	Pinion; Hard Alloy 64dp - 28T
U3629	Pinion; Hard Alloy 64dp - 29T
U3630	Pinion; Hard Alloy 64dp - 30T
U3631	Pinion; Hard Alloy 64dp - 31T
U3632	Pinion; Hard Alloy 64dp - 32T
U3633	Pinion; Hard Alloy 64dp - 33T
U3634	Pinion; Hard Alloy 64dp - 34T
U3635	Pinion; Hard Alloy 64dp - 35T
U3636	Pinion; Hard Alloy 64dp - 36T
U3637	Pinion; Hard Alloy 64dp - 37T
U3638	Pinion; Hard Alloy 64dp - 38T
U3639	Pinion; Hard Alloy 64dp - 39T
U3640	Pinion; Hard Alloy 64dp - 40T
U3641	Pinion; Hard Alloy 64dp - 41T
U3642	Pinion; Hard Alloy 64dp - 42T
U3643	Pinion; Hard Alloy 64dp - 43T
U3644	Pinion; Hard Alloy 64dp - 44T
U3645	Pinion; Hard Alloy 64dp - 45T
U3646	Pinion; Hard Alloy 64dp - 46T
U3647	Pinion; Hard Alloy 64dp - 47T
U3648	Pinion; Hard Alloy 64dp - 48T
U3649	Pinion; Hard Alloy 64dp - 49T
U3650	Pinion; Hard Alloy 64dp - 50T



Snap the body washers onto the pins.

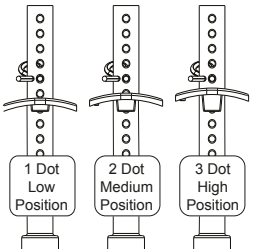
Attach R-clips after body washers.

Ø1.5 x 11.8 x 4

Select the correct pin height for your bodyshell.

Mark and drill your body to diameter 6.5mm for the body posts.

Select the correct body washer to fine tune the bodyshell height. Each incremental change is 1.2mm.

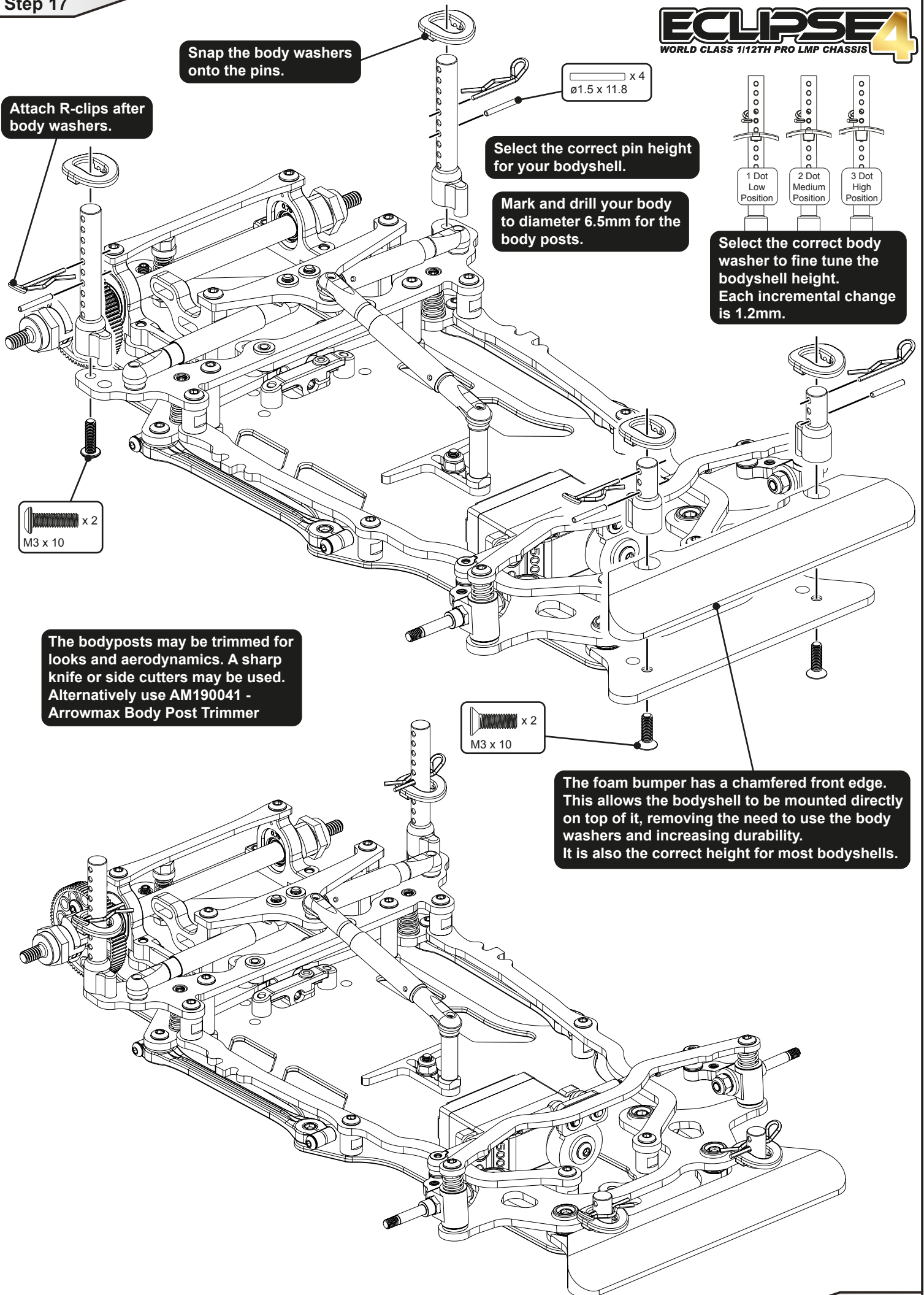


M3 x 10 x 2

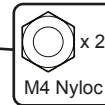
The bodyposts may be trimmed for looks and aerodynamics. A sharp knife or side cutters may be used. Alternatively use AM190041 - Arrowmax Body Post Trimmer

M3 x 10 x 2

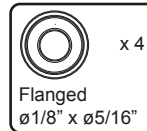
The foam bumper has a chamfered front edge. This allows the bodyshell to be mounted directly on top of it, removing the need to use the body washers and increasing durability. It is also the correct height for most bodyshells.



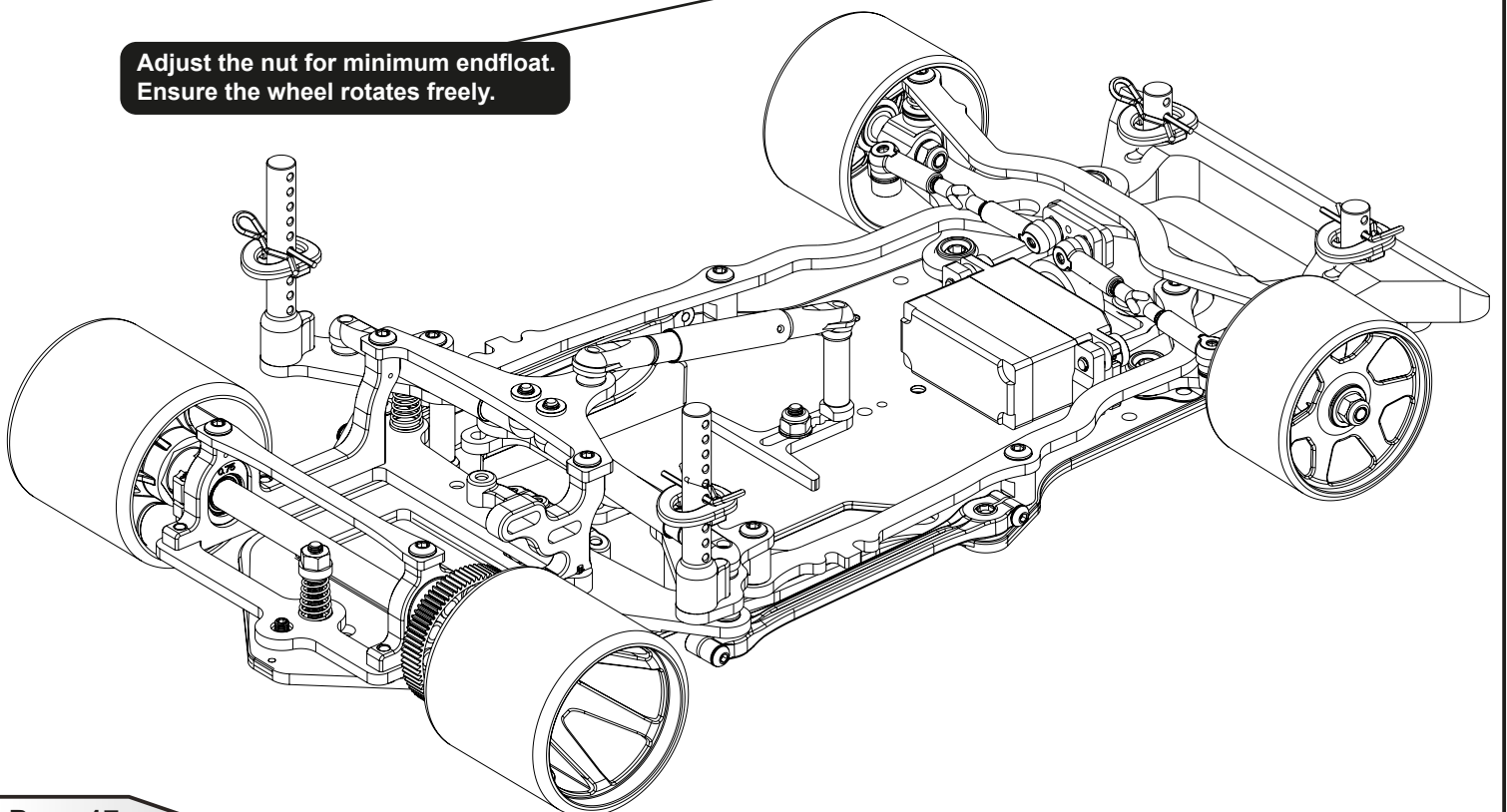
When using the differential (U8171) the three bolt rear wheels (JT2) must be used.



Wheels and tyres NOT included in the kit.



Adjust the nut for minimum endfloat.
Ensure the wheel rotates freely.



LiPo NOT included.

Motor NOT included.

Pinion NOT included.

x 2
Black 1.0 mm

ESC NOT included.

Servo Tape x 6

x 1
M3 x 4

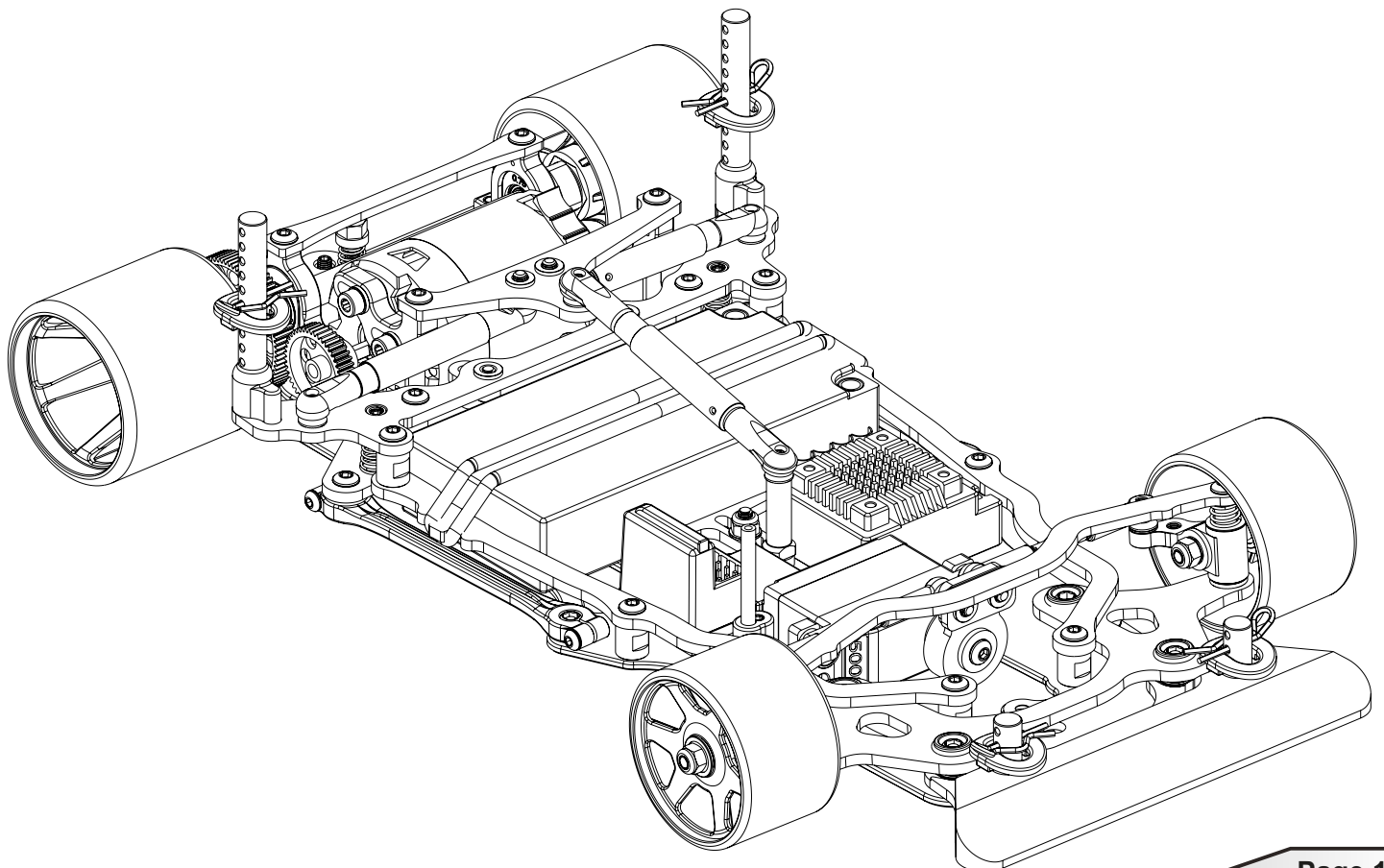
x 2
M3 x 10

Adjust the gear mesh to be as close as possible without binding.

Transponder NOT included.

Receiver NOT included.

x 1
M3 x 6





CR280 Ti Pro Ball Studs - Short - (pr)
U7825 Titanium Pivot Ball 5.5mm Low (pr)
U7828 Titanium Ball Stud Low (Ultra Short) (pk4)



CR664 Alloy Motor Spacer - 1mm - pk2



U2135 M4 Nyloc Wheel Nut - Purple Alloy (pk4)
U2810 M4 Nyloc Wheel Nut - Red Alloy (pk4)
U2811 M4 Nyloc Wheel Nut - Blue Alloy (pk4)



U3582 Precision Balance Pivot Set



U4328 Impact Servo Saver
U7680 Sanwa Servo Spacer - Eclipse 2 (pr)
U8119 Servo Screw 10mm (pr)



U4970 C/F Rear Axle - Eclipse
U4974 LH Wheel Clamp - Eclipse
U7883 Steel Diff Axle - Atom 2
U7298 Alloy Rear Wheel Screws - Atom/Eclipse (pk6)



U7453 30/40mm Fan Mount Kit - ATOM
U8146 Alloy Fan Mount - Eclipse 4 (pr)



U7934 C/F Camber Strap 1.0 Deg - Eclipse 3
U8139 C/F Top Deck 2.0mm - Eclipse 4 (pr)



U7709 M3 Black Alloy Washers 0.75mm (pk10)
U7712 M3 Black Alloy Washers 3.00mm (pk10)
U7774 M3 Alloy Washer Black 1.5 mm (pk10)
U7943 Alloy Spacer Clip 0.5mm (pk4)
U7944 Alloy Spacer Clip 0.75mm (pk4)



U7897 Alloy Pivot Spacer 1mm - Atom 2 (pr)
U7918 Alloy Pivot Mount - Atom 2
U7919 Alloy Pivot Block - Atom 2



U7936 Titanium King Pin - Eclipse 3 (pr)
U7937 Titanium Front Axle - Eclipse 3 (pr)



U8065 M3 Alloy Thread Inserts - pk8



U8126 Mass Damper Shaft
U8128 Mass Damper Weight 23g
U8129 Mass Damper Weight 12g
U8137 Mass Damper Set



U8153 Ride Height Shim 0.20mm - Eclipse 4 (pk4)

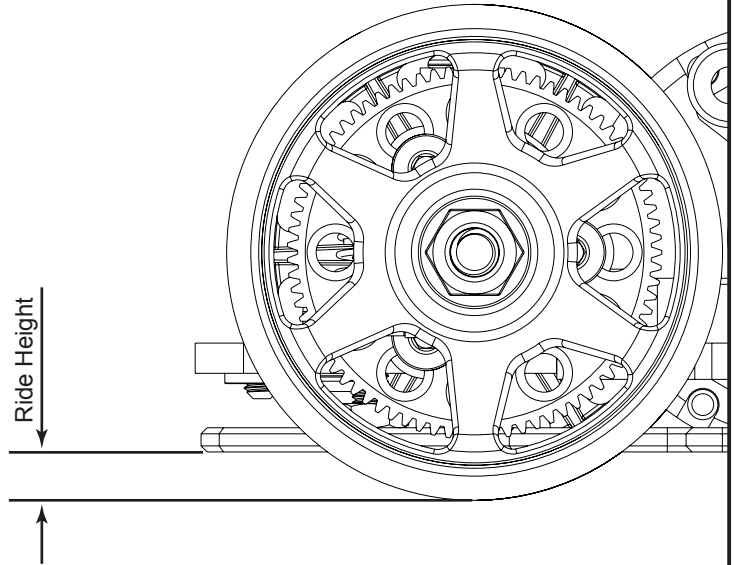


U7940 C/F Chassis - Eclipse 3

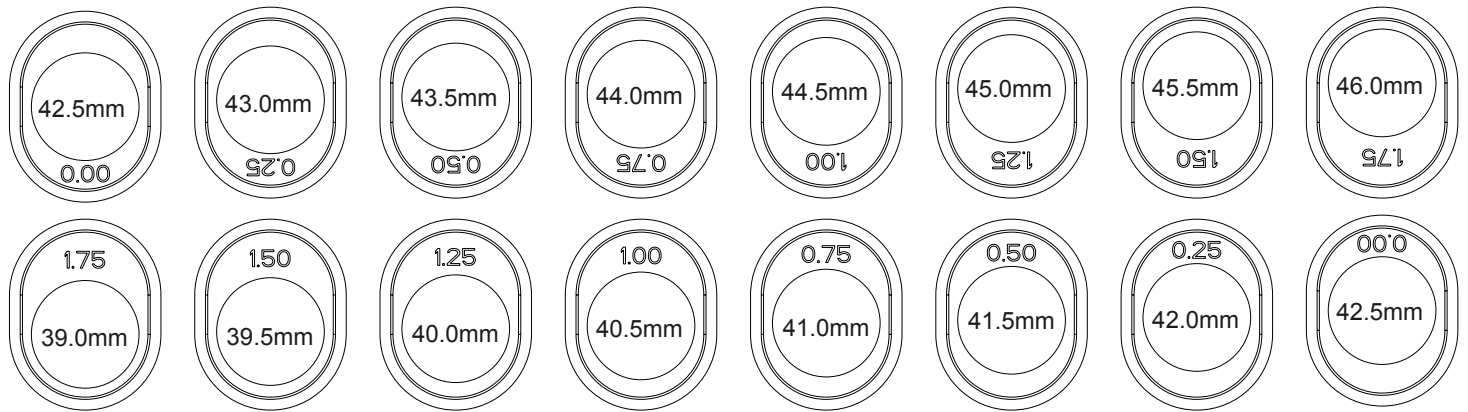
Ride Height

In general always run the car as low as possible, without the chassis grounding out.

A good starting point with foam tyres is 3.5mm.



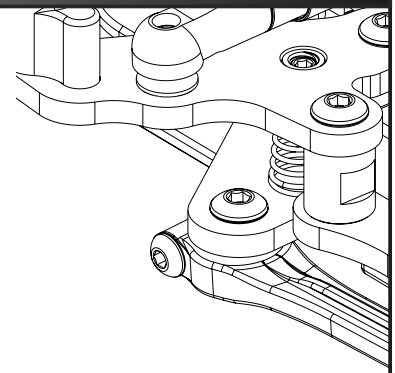
Using these Eccentrics for the foam diameter stated will give the kit rear ride height setting of approximately 3.5mm.



Roll Springs

Roll springs are used to control the cars steering balance. A softer spring will give an easier to drive car. Stiffer roll springs can be used to give a more aggressive steering car. The standard setting has the roll springs uncompressed and both just touching the lower pod plate when the car is stationary. Screwing them downward and compressing the springs creates more steering while loosening them gives an easier to drive car.

Adjusting the springs allows the tweak to be infinitely adjusted. Ensure they are not set too unevenly. If more than 0.5mm different, further investigation is required.

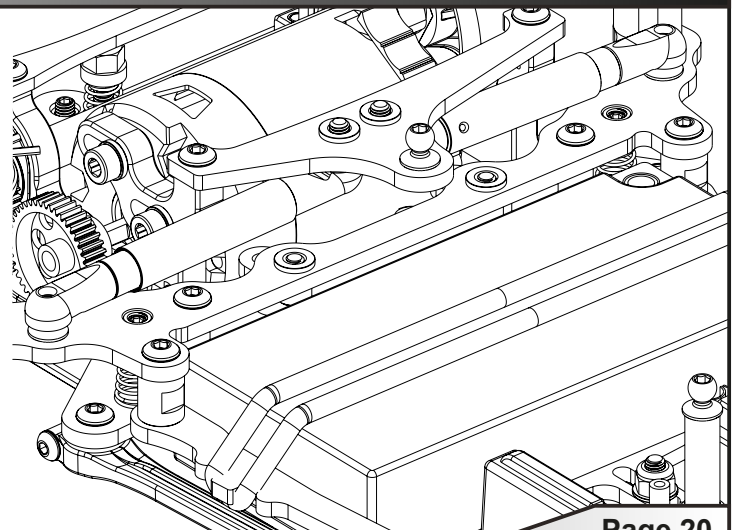


Rear Roll Damping

Generally in high traction track conditions, thinner roll damping oil is better. Low traction tracks may require thicker damping.

Thicker roll damping oil slows the weight transfer of the rear and makes the car easier to drive. Thicker oil can help if the track surface is bumpy and there are issues with bumps in the middle of the corner.

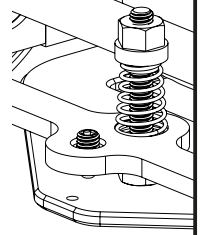
A good range is between 7,000cSt and 20,000cSt



Rear Bump Spring

This spring is used to set the pod angle. Adjust the spring tension so that the pod is horizontal when the car is on a flat surface. This gives the kit setting with zero anti-squat or pro-squat.

A harder bump spring can give more initial steering. A softer bump spring will give more aggressive mid corner steering and improve the cars bump handling ability.



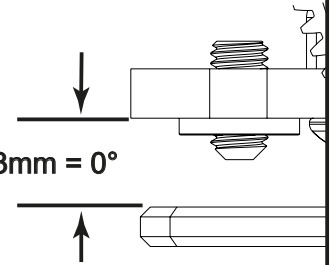
Anti-squat

If the bump spring is screwed down further, the pod will no longer be horizontal. Angled down at the rear is Anti-squat. If the spring is unscrewed from horizontal, the pod will be angled forwards. This is Pro-squat.

Anti-squat resists the weight transfer to the rear under power. This will increase on power steering. Typically anti-squat may be used but pro-squat is rarely useful. Setting Anti-Squat can be done by setting this dimension using digital calipers.

4.3mm = 0° Anti-squat. A smaller dimension = More Anti-Squat.

4.3mm = 0°

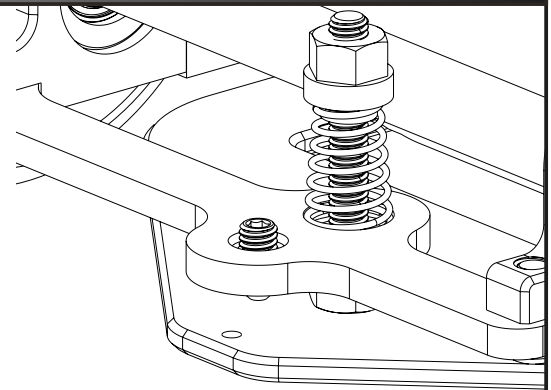


Rear Droop

Rear droop adjusts the balance of the cars handling. Less droop makes the car more aggressive, squaring up the turns. More droop gives less corner rotation but an easier to drive car. More droop also improves the cars bump handling.

Start with 1mm of droop.

To set this, start with the droop screw backed out and screw in to reduce droop. Measure this by measuring the cars rear ride height, then take all the weight off the car by lifting from the rear of the centre damper tube (the wheels must still just be touching the floor). Measure the chassis from the floor in this position and subtract the ride height to calculate the droop.

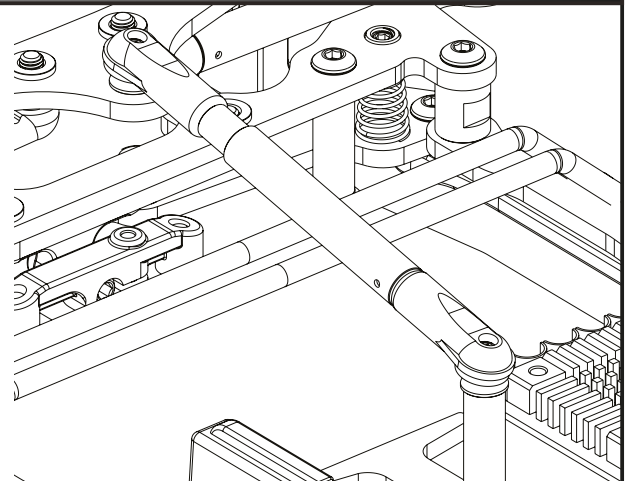


Rear Bump Damping

Generally in high traction track conditions, thinner bump damping oil is better. Low traction tracks may require thicker damping.

Thicker bump damping oil slows the weight transfer of the rear and makes the car easier to drive when coming off power. Thicker oil can help if the track surface is bumpy and there are issues with bumps when the car is moving in a straight line.

A good range is between 15,000cSt and 50,000cSt

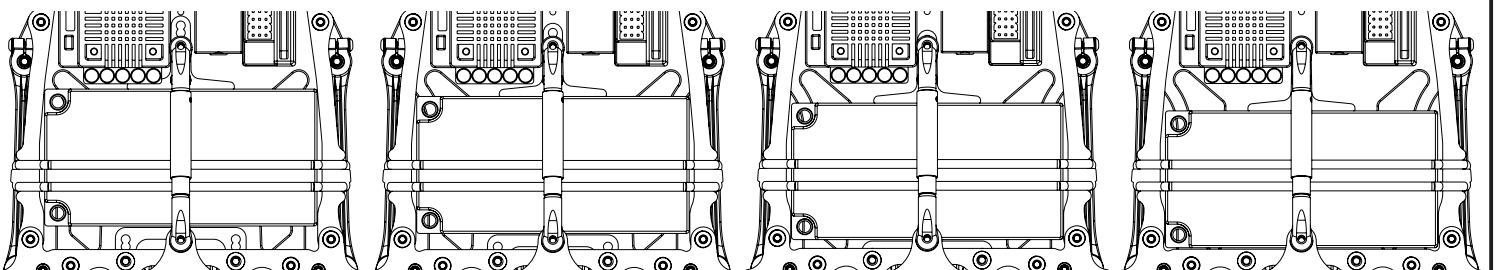


LiPo Position

The Eclipse 4 has four LiPo positions.

A more forward LiPo will make the car easier to drive.

A more rearward LiPo will make the car more aggressive and provide more steering.



Roll Centre Adjustment (Speed Secret)

When using the alloy speed secret pivot parts (U7918 and U7919) the roll centre can be adjusted by adding or removing spacers from below the alloy pivot mount and alloy pivot block.

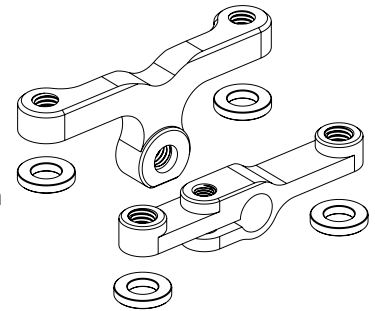
Lowering the roll centre (removing spacers) will give the car more grip and increase chassis roll.

Raising the roll centre (adding spacers) will increase steering by making the car rotate more from the rear.

The alloy pivot mount and block need a 1mm spacer in order to maintain kit roll centre.

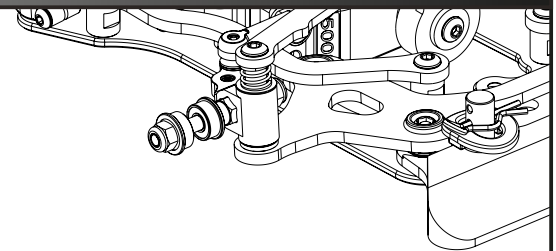
MUST have equal spacers beneath both parts.

Racers Tip: Using U7897 1mm Alloy Pivot Spacer can make this adjustment much easier. Please note: These must both be inserted from the front side.



Front Springs

Softer springs will ride the bumps better and generally allow the car to roll more which can increase steering, especially in the middle of the corner. Harder springs make the car more responsive and are more suitable for high grip tracks. They will generally increase initial steering but improve mid corner stability.



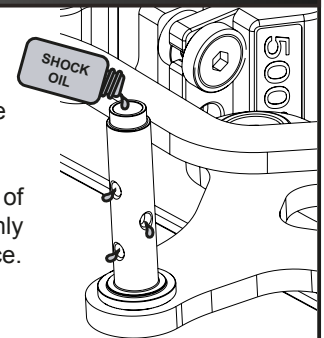
Front Damping

Front damping can be used to tune the car depending on the track traction levels. Like rear damping, in high traction track conditions, thinner oil is required, compared to low traction track conditions, where thicker oil can improve the cars driveability.

Thicker oil on the kingpin generally always gives a less responsive, easier to drive car. Too thick oil on the kingpin may lead to a 'lazy' feeling car which lacks corner speed.

We suggest a wide range of possibilities here starting from 12,000cSt - 40,000cSt

Oil can be filled inside the kingpins to give a long lasting damping effect. After some oil squirts out of all the holes, spread evenly around the kingpin surface.

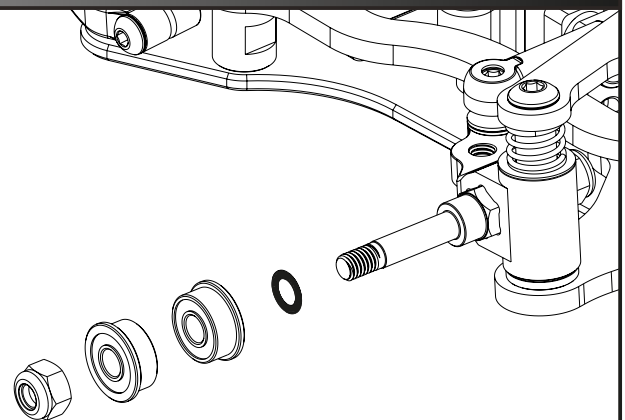


Front Track Width

Wider front track width will make the car easier to drive, provide less steering and give a slower response.

Narrower front track width will make the car harder to drive, provide more steering and give a faster response.

Optional front track width adjustment shims: U4862



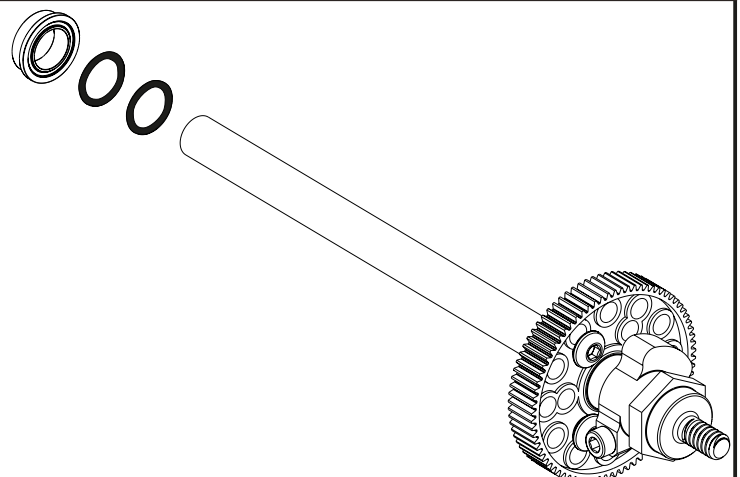
Rear Track Width

Wider rear track width provides increased rear grip and an easier to drive car.

Narrower rear track width increases corner speed and steering making the car harder to drive.

Kit rear width has a 0.5mm and a 2.0mm spacer on both sides. Remove or add spacers to suit (equally both sides).

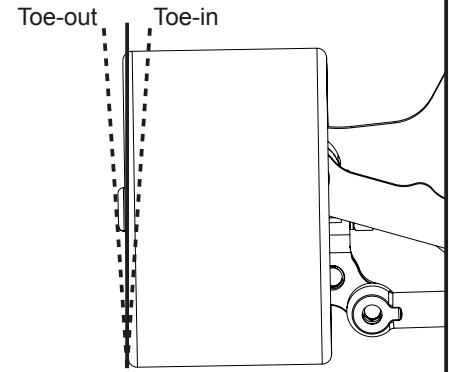
Optional rear track width adjustment shims: U4971



Front Toe

Parallel front wheels or a slight Toe-out (up to 1 degree per side) is our suggested setting range.

Toe-out gives more initial steering. It does however make the car more difficult to drive on the straight, due to increased responsiveness.

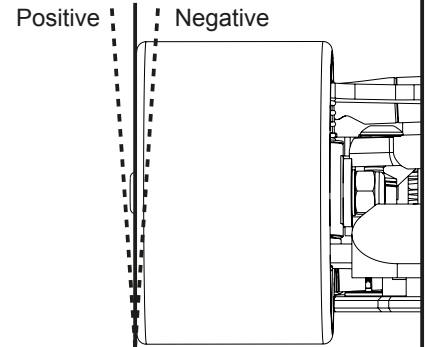


Camber

Increasing the negative camber angle will increase the cars steering. This will make the car more difficult to drive but often faster on a lap.

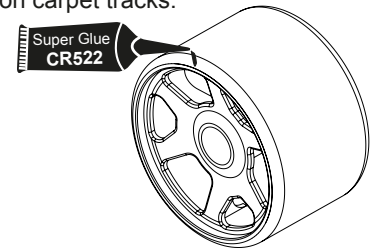
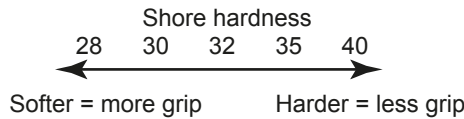
Reducing the negative camber angle is a good setting change if traction roll is a problem.

As a general rule, setting the camber so that the tyres wear without any coning will give the most ideal setting in usual conditions.



Tyres

The most important factor in racing is to get the tyres right. Contact foam tyres are designed for use on carpet tracks.



Use softer front tyres if you want more steering, and harder front tyres if you want less steering. In high traction conditions sometimes you can have too much overall grip. Using harder tyres all round should make you faster through the corners with less traction rolling in these conditions. If the track grip is not high enough, or the tyres are too hard, the car may slide and stop in the corners, if this is the case, reduce the shore rating until the track conditions change.

RACERS TIP

43mm Rear, 41.5mm Front is a good all round tyre size, reducing this size is only an advantage in extreme conditions to prevent grip roll. If you have too much steering then add a thin layer of superglue (CR522 or MR-Superglue) to the outside edge of the front tyre to reduce the front tyre grip. This can be used to prevent grip roll in extreme conditions.

Gear Ratio

First work out the gear ratio from the spur gear and pinion (For example 76/40 = 1.9).

Then complete the following equation.

$$\frac{43 \text{ (tyre dia)} \times \pi \text{ (3.142)}}{1.9 \text{ (gear ratio)}} = 71.1\text{mm/rev}$$

In this chart we have given the mm/rev figures for our suggested tyre size 43mm, for a range of spurs and pinions.

64DP GEARS

	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54		
72																	65.68	67.55	69.43	71.31	73.18	75.06	76.94	78.81	80.69	82.56	84.44	86.32	88.19	90.07	91.95	93.82	95.70	97.58	99.45	101.33		
76													55.11	56.89	58.66	60.44	62.22	64.00	65.78	67.55	69.33	71.11	72.89	74.66	76.44	78.22	80.00	81.77	83.55	85.33	87.11	88.89	90.66	92.44	94.22	96.00		
78											50.23	51.96	53.70	55.43	57.16	58.89	60.62	62.36	64.09	65.82	67.55	69.29	71.02	72.75	74.48	76.21	77.95	79.68	81.41	83.14	84.87	86.61	88.34	90.07	91.80	93.53		
88	29.17	30.71	32.24	33.78	35.31	36.85	38.38	39.92	41.45	42.99	44.52	46.06	47.59	49.13	50.66	52.20	53.74	55.27	56.81	58.34	59.88	61.41	62.95	64.48	66.02	67.55	69.09	70.62										
94	27.31	28.75	30.18	31.62	33.06	34.50	35.93	37.37	38.81	40.24	41.68	43.12	44.56	45.99	47.43	48.87	50.31	51.74	53.18	54.62	56.05	57.49																

Minimum Combined Tooth Sum 107T - Maximum Combined Tooth Sum 134T (64DP)

Driver Details

Name _____
 Date _____
 Event / Track _____
 Weather _____
 Result _____
 Fastest Lap Time _____

Chassis and Electrics

Bodyshell _____
 Rear Wing Height _____ mm
 E.S.C _____
 Servo _____
 Receiver _____
 LiPo _____

Track Conditions

Grip Level High Medium Low
 Type Tight Open Mixed
 Surface Carpet Tarmac
 Condition Smooth Bumpy
 Air Temperature _____ °C _____ °F
 Venue Indoor Outdoor

Track Dimensions

Motor and Gearing

Motor _____
 Timing _____ Deg
 Spur Size _____
 Pinion Size _____
 Rollout _____ mm/rev

Tyres and Additive

Compound	Front	Rear
Diameter	Front mm	Rear mm
Tyre Additive	Front	Rear
Additive Time	Front Minutes	Rear Minutes
Additive Coverage	Front	Rear
Sidewall Glue	Front	Rear

Front

Front Ride Height _____ mm
 Caster _____ Deg - Spacer A(Rear) _____ mm - Spacer B (Front) _____ mm
 Droop _____ mm Droop Spacers _____ mm
 Camber _____ Deg
 Toe _____ Deg
 Inside Wheel Lock Angle _____ Deg
 Outside Wheel Lock Angle _____ Deg
 Body Post Pin Height Hole _____ Hanger Dot Number
 Front Springs Black Silver Gold White(Kit)
 Front Damping Oil _____ cSt
 Bump Steer Spacer _____ mm

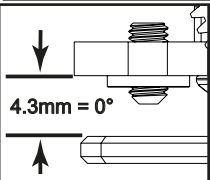
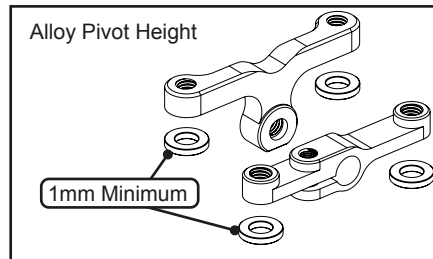
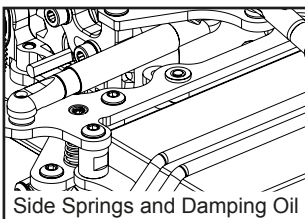
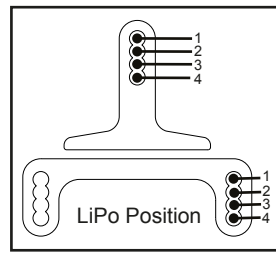
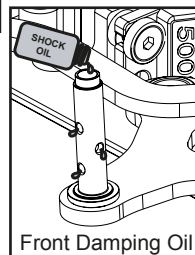
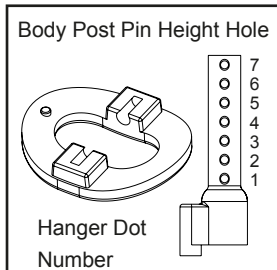
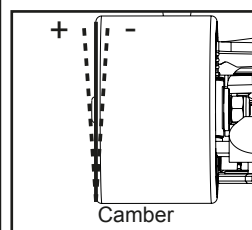
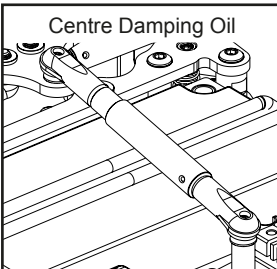
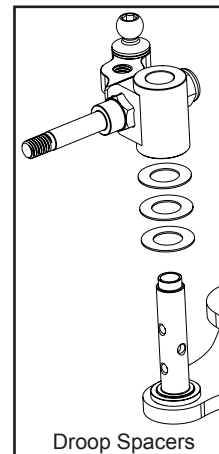
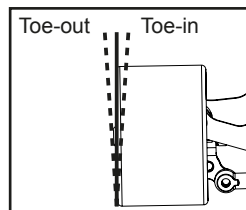
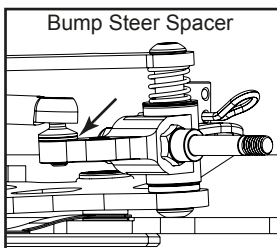
Middle

LiPo Position 1 2 3 4
 Centre Damping Oil _____ cSt
 Speed Secret Alloy Pivot Height Adjustment Alloy _____ mm Kit
 Side Springs Black(Kit) Silver Gold
 Nickel Red Dot Black Ultra
 Side Damping Oil _____ cSt
 Topdeck Option 2.0mm A B C D

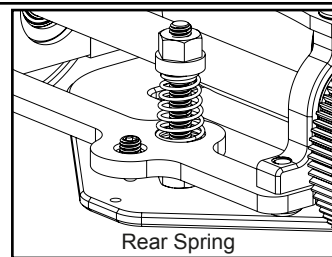
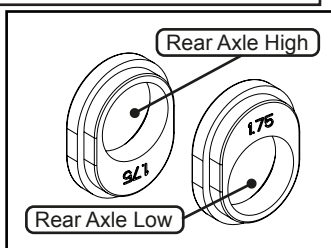
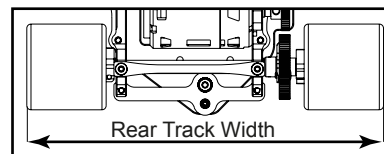
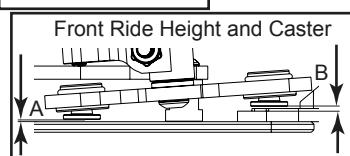
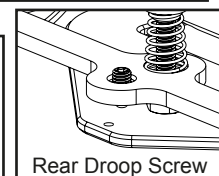
Rear

Rear Ride Height _____ mm - Insert _____ - Axle Low High
 Droop _____ mm
 Anti Squat _____ mm
 Rear Axle Spool Axle Ball Differential - Preload _____ Deg
 Rear Track Width _____ mm
 Rear Axle Width Spacers Left _____ mm - Right _____ mm
 Rear Spring Black Silver Gold
 Nickel Red Dot (Kit) Black Ultra
 Body Post Pin Height Hole _____ Hanger Dot Number
 Motor Spacing _____ mm

NOTES



Topdeck Options
 A - Topdecks removed.
 B - Front screws removed only.
 C - Middle screws removed only.
 D - All screws in place.



Driver Details

Name *Test Driver*

Date

Event / Track

Weather

Result

Fastest Lap Time

Chassis and Electrics

Bodyshell *Montech M20*

Rear Wing Height *80* mm

E.S.C *Hobbywing XR10 Pro HD 1S*

Servo *Sanwa PGS-HR*

Receiver *Sanwa RX-481*

LiPo *LRP 8000*

Track Conditions

Grip Level High Medium Low

Type Tight Open Mixed

Surface Carpet Tarmac

Condition Smooth Bumpy

Air Temperature °C °F

Venue Indoor Outdoor

Track Dimensions

Motor and Gearing

Motor *Hobbywing G3R*

Timing *42* Deg

Spur Size *76T*

Pinion Size

Rollout mm/rev

Tyres and Additive

Compound Front *T35* Rear *T35*

Diameter Front *41* mm Rear *42* mm

Tyre Additive Front *SXT 3.0* Rear *SXT 3.0*

Additive Time Front *12* Minutes Rear *30* Minutes

Additive Coverage Front *7mm* Rear *Full*

Sidewall Glue Front *No* Rear *No*

Front

Front Ride Height *3.2* mm

Caster *4* Deg - Spacer A(Rear) *0.5* mm - Spacer B (Front) *1.0* mm

Droop *0.5* mm Droop Spacers *0.5* mm

Camber *1.5* Deg

Toe *-1.0* Deg

Inside Wheel Lock Angle *30* Deg

Outside Wheel Lock Angle Deg

Body Post Pin Height Hole *Body on the Foam* Hanger Dot Number *N/A*

Front Springs Black Silver Gold White(Kit)

Front Damping Oil *12k* cSt

Bump Steer Spacer *0.5* mm

Middle

LiPo Position 1 2 3 4

Centre Damping Oil *50k* cSt

Speed Secret Alloy Pivot Height Adjustment Alloy mm Kit

Side Springs Black(Kit) Silver Gold

Nickel Red Dot Black Ultra

Side Damping Oil *10k* cSt

Topdeck Option *2.0mm* A B C D

Rear

Rear Ride Height *3.7* mm - Insert *0.25* - Axle Low High

Droop *0.8* mm

Anti Squat *4.3* mm

Rear Axle Spool Axle Ball Differential - Preload Deg

Rear Track Width *171.6* mm

Rear Axle Width Spacers Left *3* mm - Right *2* mm

Rear Spring Black Silver Gold

Nickel Red Dot (Kit) Black Ultra

Body Post Pin Height Hole *5* Hanger Dot Number *3*

Motor Spacing *0.5* mm

NOTES

This is a high grip setup

