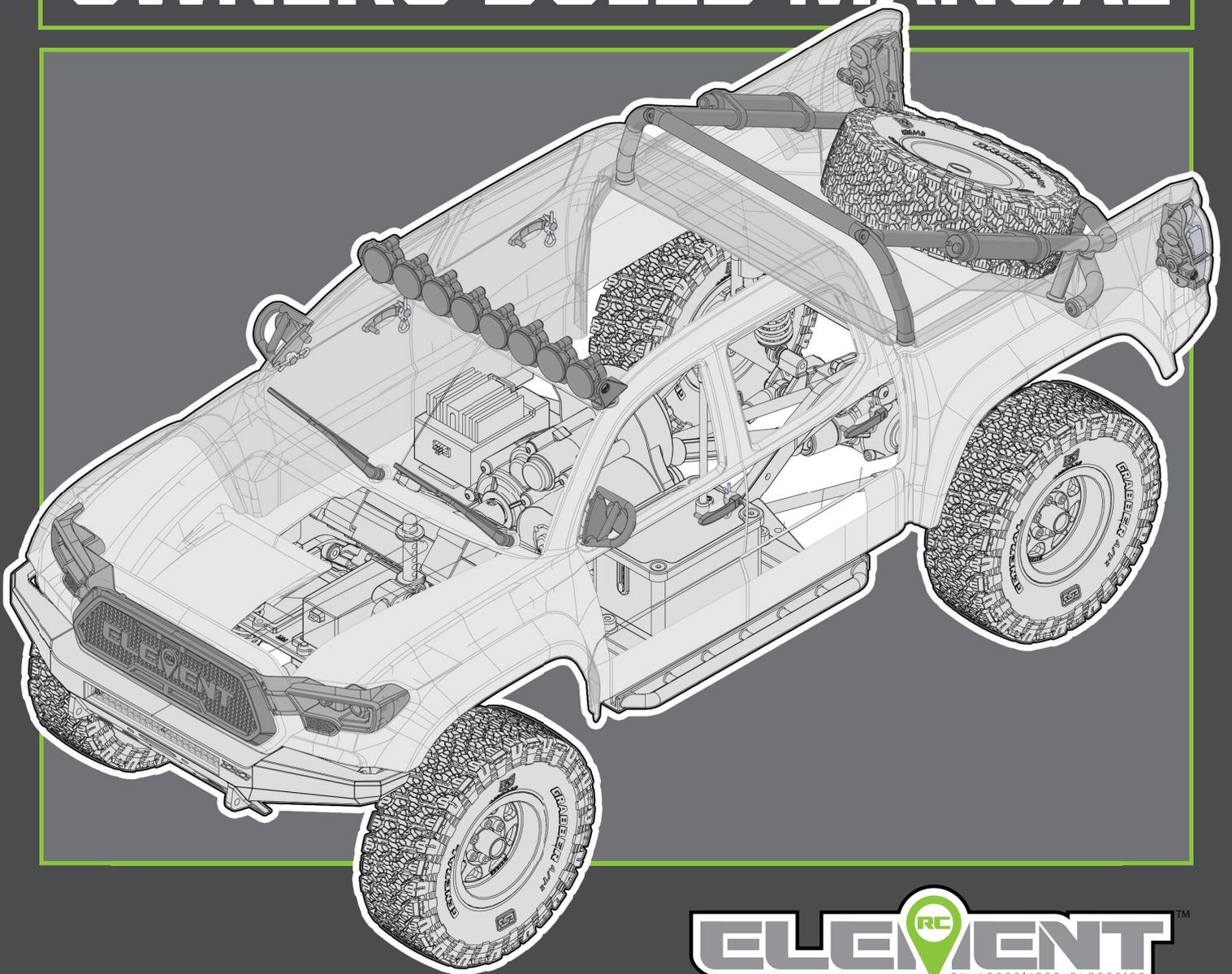


ENDURO

KNIGHTWALKER
OFF-ROAD 4X4



OWNERS BUILD MANUAL





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Lake Forest, CA 92630

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Your journey begins here.



INTRODUCTION

Thank you for purchasing this Element RC product. This assembly manual contains instructions and tips for building and maintaining your new Enduro chassis. Please take a moment to read through this manual to help familiarize yourself with these steps. We are continually changing and improving our designs; therefore, actual parts may appear slightly different than in the illustrations. New parts will be noted on supplementary sheets located in the appropriate parts bags.

ENDURO TRAIL TRUCK

A performance rig built to endure. When hitting the trail, you want to do it with confidence and the answer is the all new Enduro Trail Truck!

At the heart of the Enduro is our revolutionary Stealth® X gearbox. Although the exterior appears to have a conventional 3-gear transmission look, the inside is far from conventional. The Stealth® X features the ability to adjust the rear drive ratio independently of the front drive across three levels: stock overdrives the front end 5.7% (installed in RTR), option 1 provides a one-to-one drive ratio front-to-rear (available separately), and option 2 overdrives the front end 11.83% (included with RTR).

Feeding the power to the tires are 3-piece telescopic driveshafts with an extruded aluminum center section, universal front drive axles, and hardened steel ring and pinion gears. With the Enduro drivetrain, delivering useful power will not be an issue.

We relocated the steering link assembly from the conventional location, to behind the axle (BTA). This feature greatly improves approach angle and front end clearance, making rough terrain much easier to handle.

The Enduro Trail Truck comes ready for adventure right out of the box. It comes equipped with a Reedy Power high-torque metal gear servo. The all-new, ultra-smooth and powerful, 16-turn 5-slot brushed crawler motor and Fly Sky 2.4GHz multi-channel ESC / receiver combo supply ample power to this tough rig.

With all this packed in one box, we know the Enduro Trail Truck is ready for the trail...Are you?

FEATURES

- Stealth X Gearbox with adjustable overdrive gears
- BTA steering [Behind the Axle]
- CMS [Chassis Mounted Servo]
- Integrated servo winch mount
- Adjustable front track bar
- Universal front drive axles
- Stamped steel C-Channel frame rails
- Enclosed receiver box
- 12mm wheel hexes
- Adjustable front and rear bumper mounts
- Adjustable width rock sliders
- Two battery boxes (Shorty and regular size!)
- Threaded aluminum shock bodies
- Aluminum steering plates
- Aluminum motor plate
- Adjustable body posts
- Optimized rod ends for more fluid axle articulation
- Adjustable rear shock mount positions
- Telescopic driveshaft's front and rear
- Extruded aluminum driveshaft splines
- One-piece rear axle design
- Splined front axle with adjustable caster
- Machined input pinion gear
- Metal ring gear
- Machined steel top shaft
- Metal idler gears
- Heavy duty 5mm diameter steel links
- Precision metal ball bearings included
- Steel servo horn
- Licensed 1.9"x4.19" General Grabber A/TX tires

ELECTRONICS:

- Water resistant 2S-3S LiPo compatible Fly Sky 2.4GHz multi-channel combo electronic speed control and receiver
- Smooth and powerful Reedy Crawler 16T 5-slot brushed motor
- Reedy high-torque metal gear servo

BODY FEATURES:

- Body thermoformed in high-strength polycarbonate
- One-piece cab and bed design
- Clear windows
- Molded grill
- Replaceable headlight / taillight lenses
- Side mirrors
- Headlights / taillights are LED compatible
- Adjustable front bumper

ITEMS NEEDED

The following items are required to build or maintain your Enduro Trail Truck.

- 1.5mm Allen Wrench (#1500)
- 2mm Allen Wrench (#1501)
- 2.5mm Allen Wrench (#1503)
- Pliers
- Long Nose Pliers
- 5.5mm Nut Driver (#1507)
- 7mm Nut Driver (#1508)

OTHER HELPFUL ITEMS

The following items aren't required, but will aid in the building and maintaining of your Enduro Trail Truck.

- Threadlock (#1596)
- Green Slime (#1105)

HARDWARE 1:1 SCALE VIEW

HARDWARE USED WITH OPTIONAL REPLACEMENT PART NUMBERS

FLAT HEAD SCREWS (FHCS)

	2.5x10mm (31350)
	2.5x14mm (41077)
	3x8mm (25201)
	3x10mm (25202)
	3x12mm (25203)
	3x14mm (89208)
	3x20mm (89210)
	3x24mm (89233)

SOCKET HEAD SCREWS (SHCS)

	2x5mm (31511)
	2x8mm (7187)
	2.5x6mm (41079)
	2.5x8 (89222)
	2.5x10 (41087)
	2.5x14 (71032)
	2.5x16 (41086)

LP SOCKET HEAD SCREWS (LP SHCS)

	3x6mm (41089)
	3x10mm (41090)
	3x20mm (41091)

SET SCREWS

	3x3mm (25225)
	3x16mm (4689)

MISC. SCREWS

	Shoulder Screw 3x4x10mm (42070)
	Screw Pin (42022)
	Pin 2x11mm (42019)

BUTTON HEAD SCREWS (BHCS)

	2.5x10mm (41088)
	3x5mm (31530)
	3x6mm (31531)
	3x8mm (31532)
	3x10mm (25211)
	3x12mm (89202)
	3x14mm (25187)
	3x16mm (89203)
	3x18mm (2308)
	3x20mm (25188)
	3x22mm (25189)
	3x24mm (89204)
	3x28mm (41078)

PIVOT BALLS

	Pivot Ball, 6mm (42041) FT Pivot Ball, 6mm (42056)
	Pivot Ball, Upper Shock (42041) FT Pivot Ball, Upper Shock (42055)

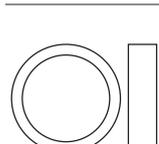
LOCK NUTS

	M3 Nuts (91477) M3 Locknuts (25215) Aluminum (31550)
	M4 Locknut W/Flange (25391)

BEARINGS

	5x10x4mm (91560)
	7x14x3.5mm (91474)
	10x15x4mm (91563)

SHIMS AND WASHERS

	Servo Horn Spacer (42041)
	3x7mmx1mm (42260)
	3x7mmx2mm (42260)
	3x7x3mm (42260)
	3x7x5mm (42260)
	3x7x7mm (42260)
	Drive Gear Shim (42027)

LINKS

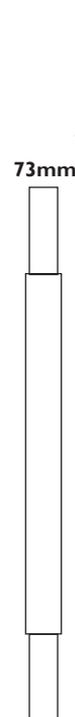
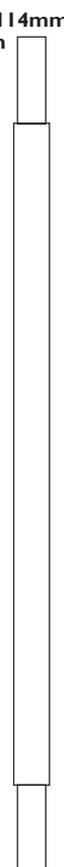
	73mm
	83mm
	93mm
	96mm
	100mm
	108mm
	114mm

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7/17/2023

01	COVER	12	DRIVESHAFTS BUILD (BAG 8)
02	INTRODUCTION	13	SHOCKS BUILD (BAG 9)
03	1:1 HARDWARE "FOLD OUT"	14	BUMPERS BUILD (BAG 10)
04	TABLE OF CONTENTS	14	WHEELS/TIRES BUILD
05	CHASSIS BUILD (BAG 1, 2)	15	BODY BUILD (BAG 11)
06	ELECTRONIC MOUNTS BUILD (BAG 3)	16	WHEELBASE CHART
07	GEARBOX BUILD (BAG 4)	17	OPTIONAL GEARBOX BUILD
08	FRONT AXLES BUILD (BAG 5)	18	BACK COVER
09	REAR AXLES BUILD (BAG 6)		
09	LINKS BUILD (BAG 7)		

USING THIS MANUAL



This symbol indicates a special note or instruction in the manual.

x2

This symbol indicates the number of the same part that is required.



This symbol indicates the order within a step to assemble parts.



This symbol indicates a Trail Tip.



This symbol indicates where Black Grease should be applied.



This symbol indicates where Green Slime can be applied. *not included



This symbol indicates where Thread Lock Adhesive should be applied. *not included



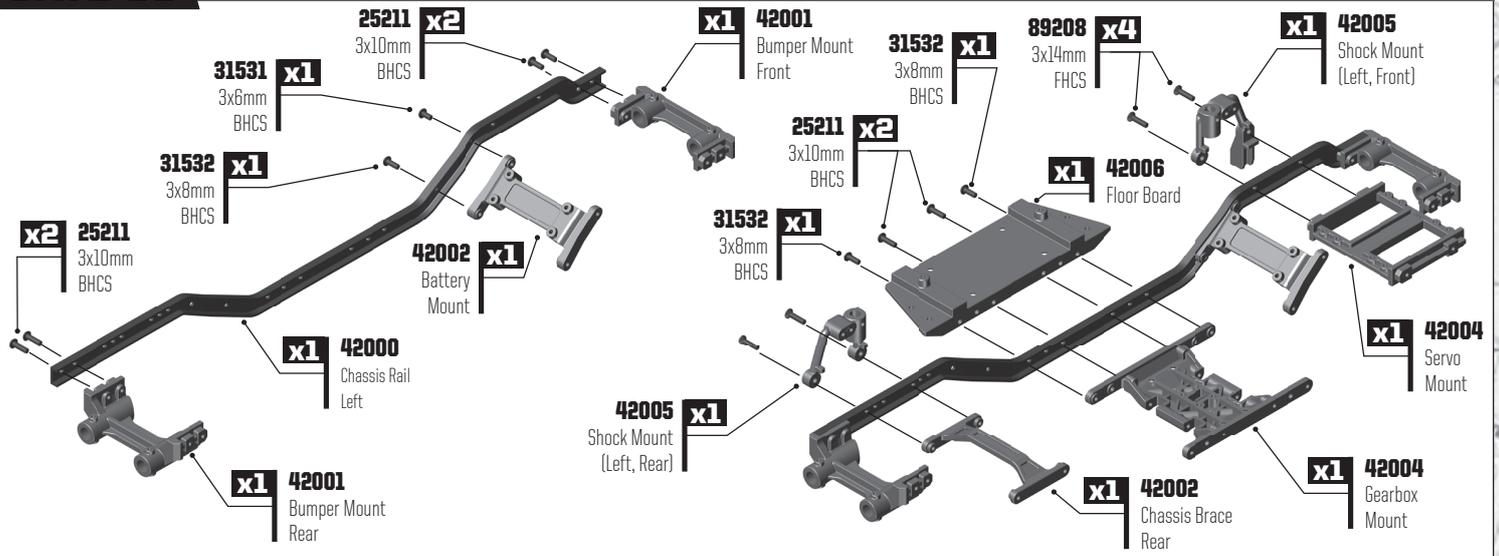
This symbol indicates where Shock Fluid should be applied.



There is a 1:1 hardware foldout page in the front of the manual. To check the size of a part, line up your hardware with the correct drawing until you find the exact size. Each part in the foldout has a number assigned to it for ordering replacement parts.

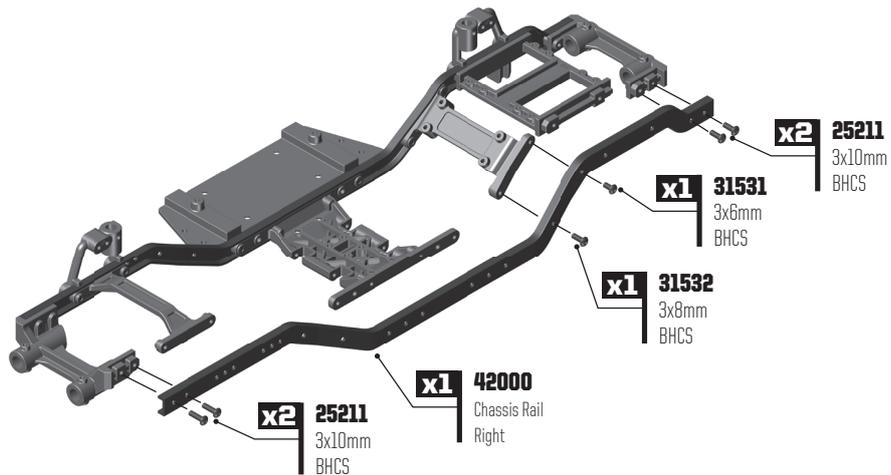
GATE 01

CHASSIS BUILD: BAG 1, 2



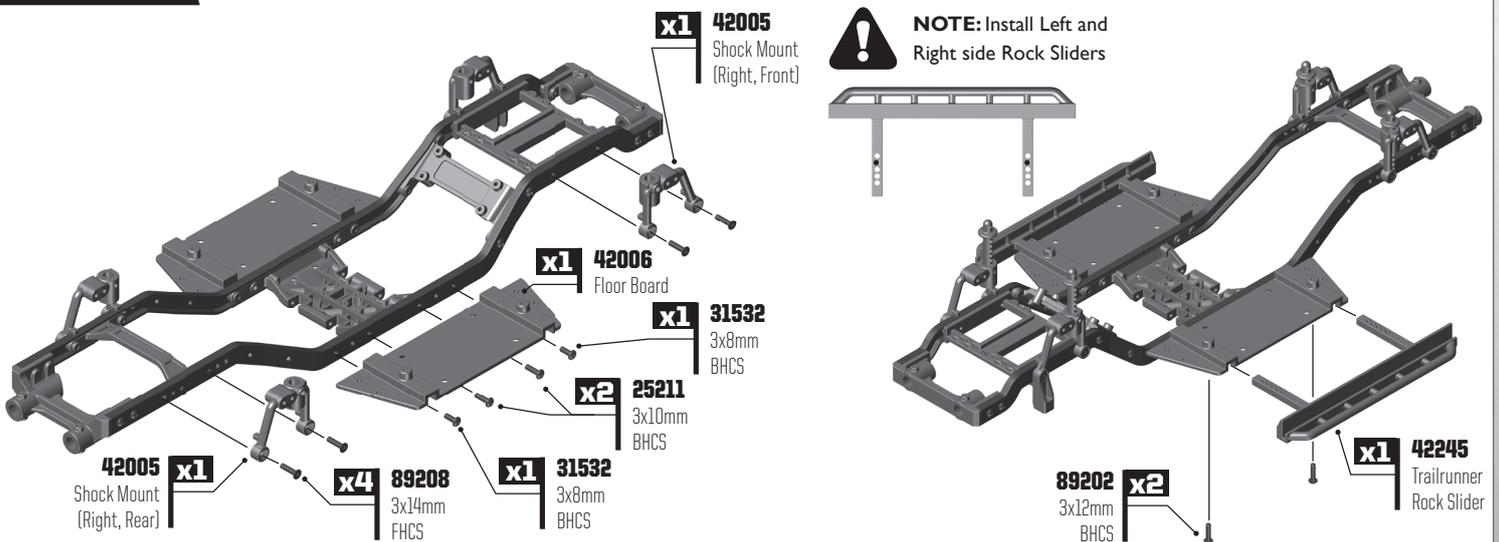
GATE 02

CHASSIS BUILD: BAG 1, 2

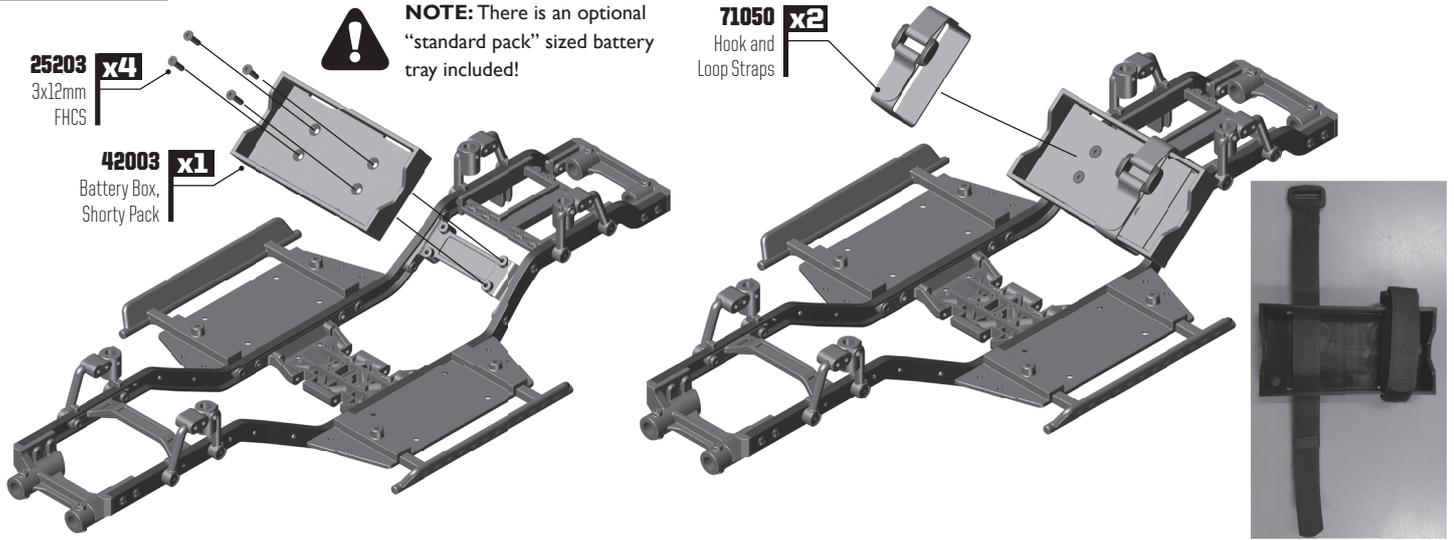


GATE 03

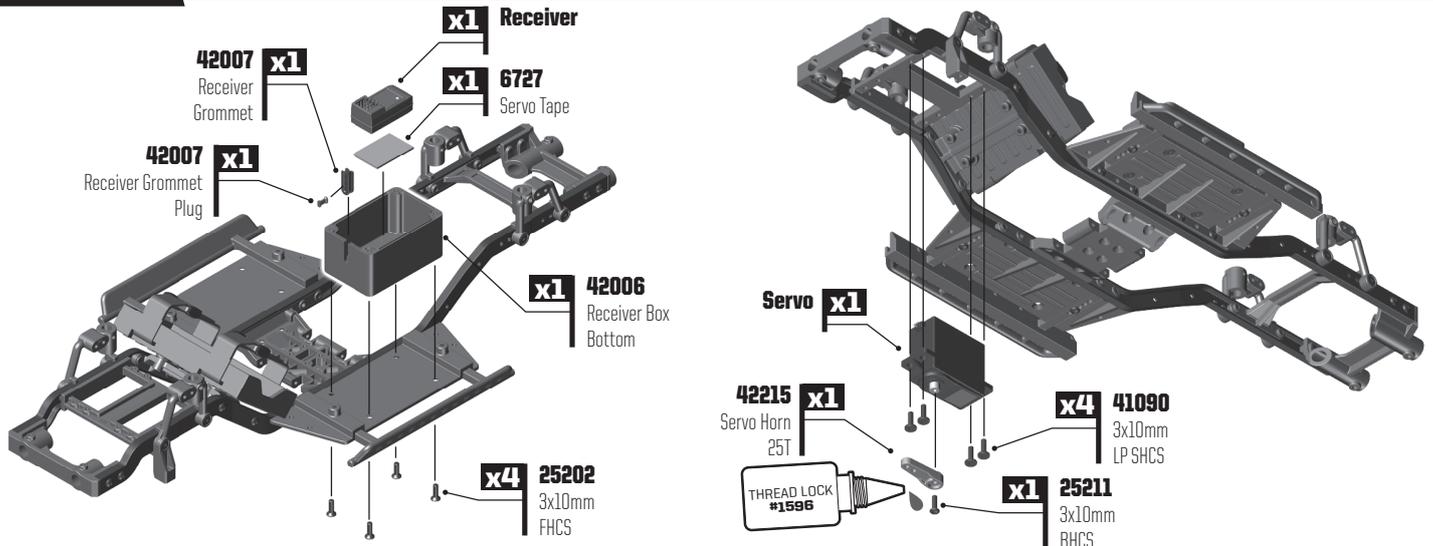
CHASSIS BUILD: BAG 1, 2



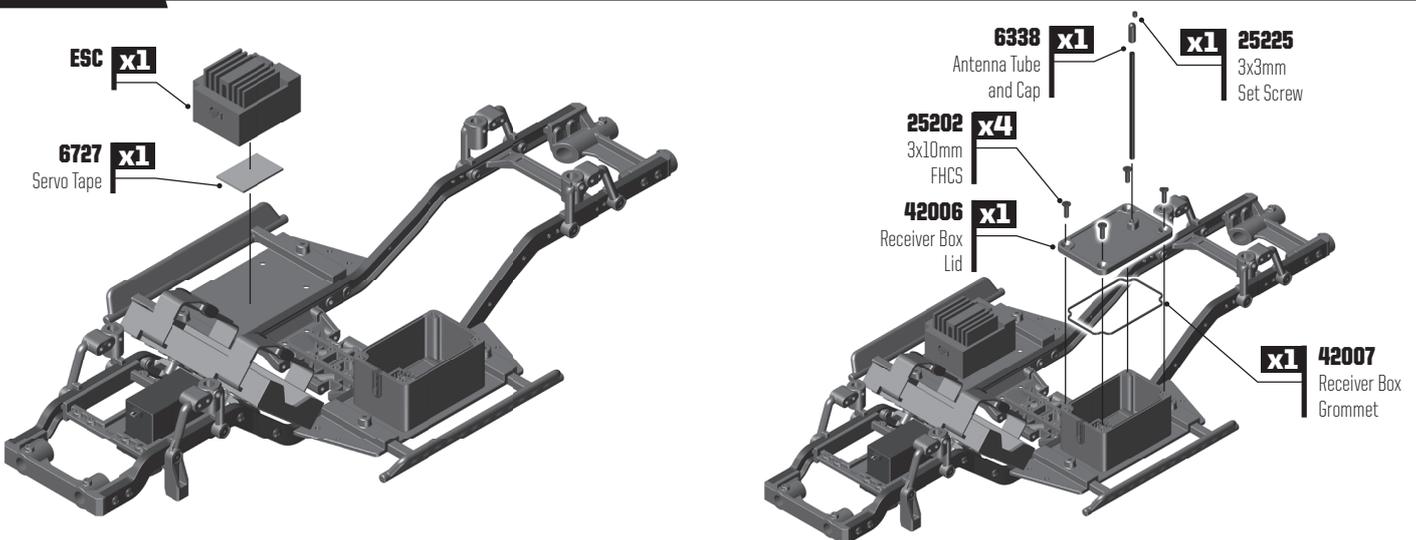
GATE 01 ELECTRONIC MOUNTS BUILD: BAG 3



GATE 02 ELECTRONIC MOUNTS BUILD: BAG 3



GATE 03 ELECTRONIC MOUNTS BUILD: BAG 3



GATE 01 GEARBOX BUILD: BAG 4

42028 Stealth X Gearbox Drive Gear, 53T (x1)

42027 Stealth X Gearbox Outdrive, Long (x1)

31350 2.5x10mm FHCS (x4)

91563 10x15x4mm Bearing (x2)

42027 Stealth X Gearbox Outdrive, Short (x1)

42027 Stealth X Gearbox Drive Gear Shim (x1)

42028 Stealth X Gearbox Drive Gear, 52T (x1)

41077 2.5x14mm FHCS (x4)

BLACK GREASE #6588

NOTE: Make sure the 10x15x4mm bearing is completely seated in the short outdrive

GATE 02 GEARBOX BUILD: BAG 4

42025 Idler Shaft Pin, 2x9mm (x2)

42025 Stealth X Gearbox Idler Shaft (x1)

42026 Stealth X Gearbox Idler Gear, 27T (x1)

42026 Stealth X Gearbox Idler Gear, 28T (x1)

41078 3x28mm BHCS (x5)

42030 Stealth X Gearbox Top Shaft, Rear (x1)

91560 5x10x4mm Bearing (x4)

42023 Stealth X Gearbox Case (x1)

91563 10x15x4mm Bearing (x2)

42023 Stealth X Gearbox Case (x1)

NOTE: There are optional gearbox builds on page 24

Over Drive Option I (Stock)

GATE 03 GEARBOX BUILD: BAG 4

42029 Stealth X Gearbox Motor Plate (x1)

25201 3x8mm FHCS (x3)

42023 Stealth X Gearbox Spur Gear Hub (x2)

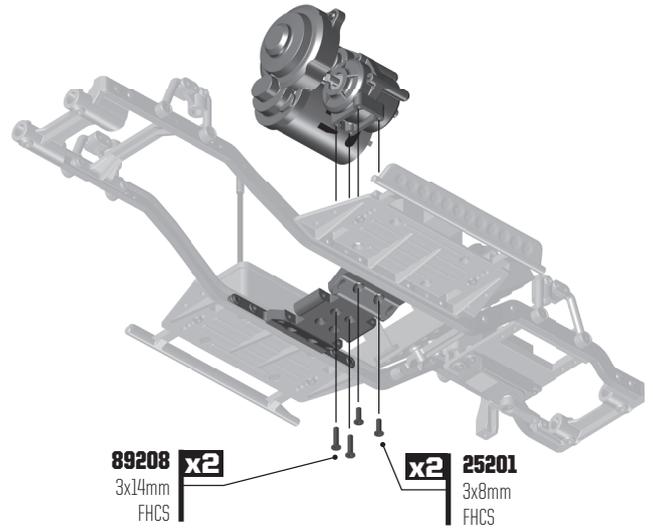
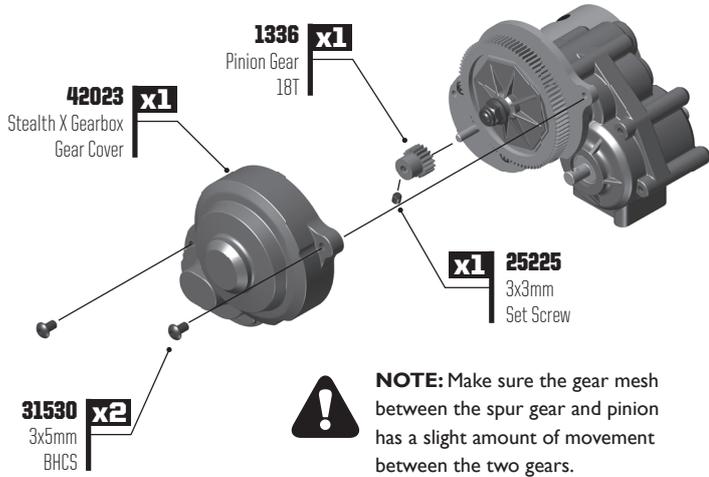
25391 FT M4 Locknut (x1)

41090 3x10mm LP SHCS (x2)

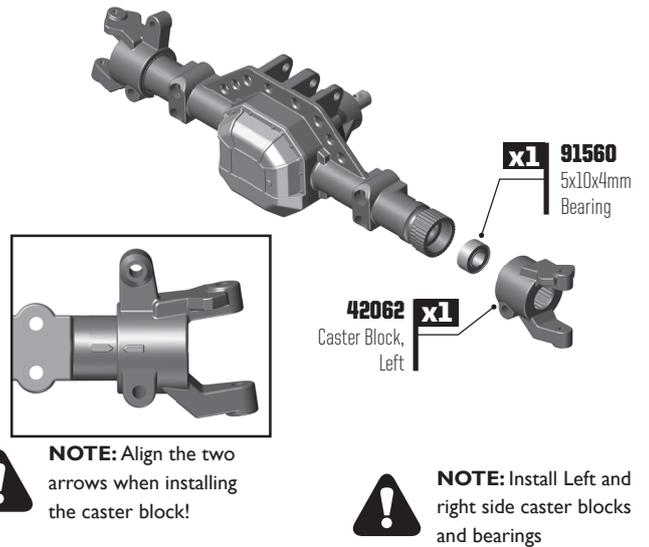
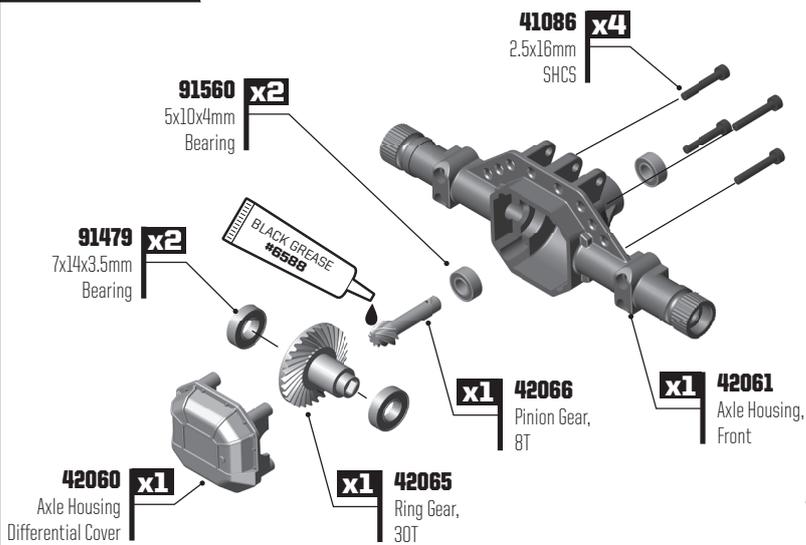
9654 Spur Gear, 48P, 87T (x1)

Motor (x1)

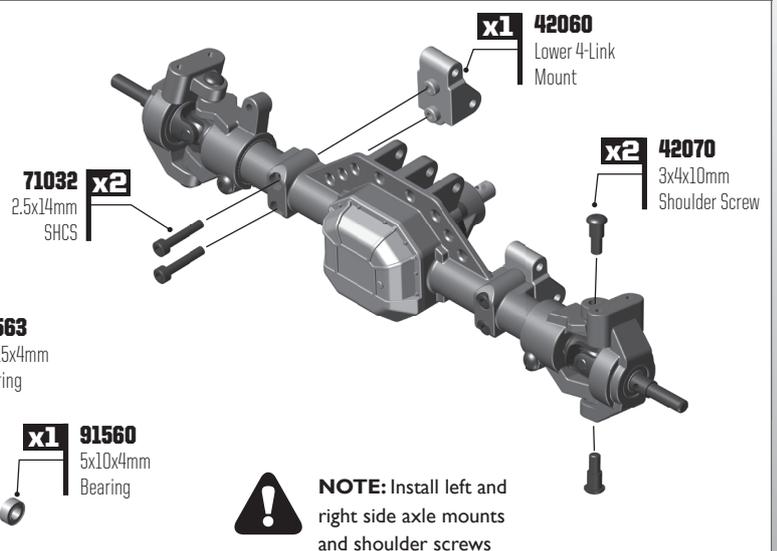
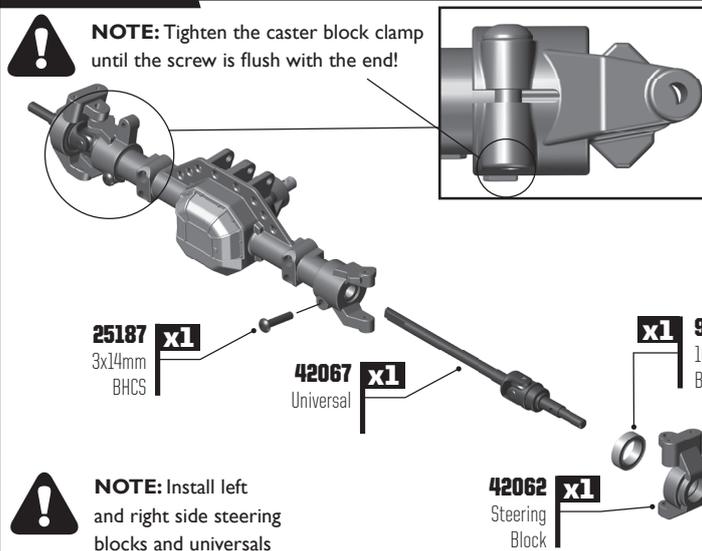
GATE 04 GEARBOX BUILD: BAG 4



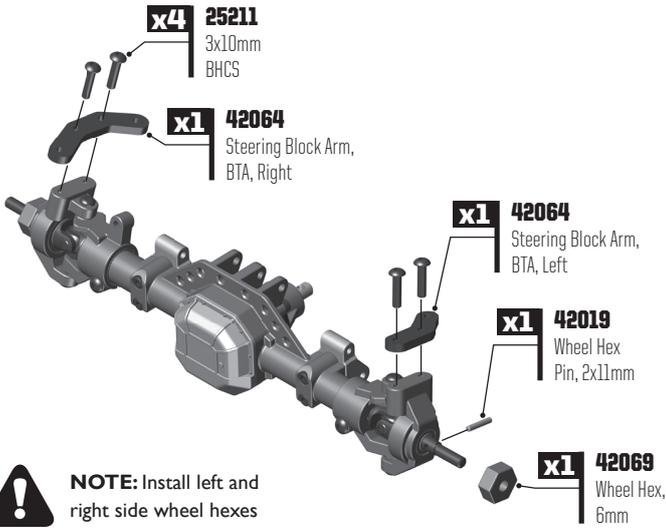
GATE 01 FRONT AXLE BUILD: BAG 5



GATE 02 FRONT AXLE BUILD: BAG 5

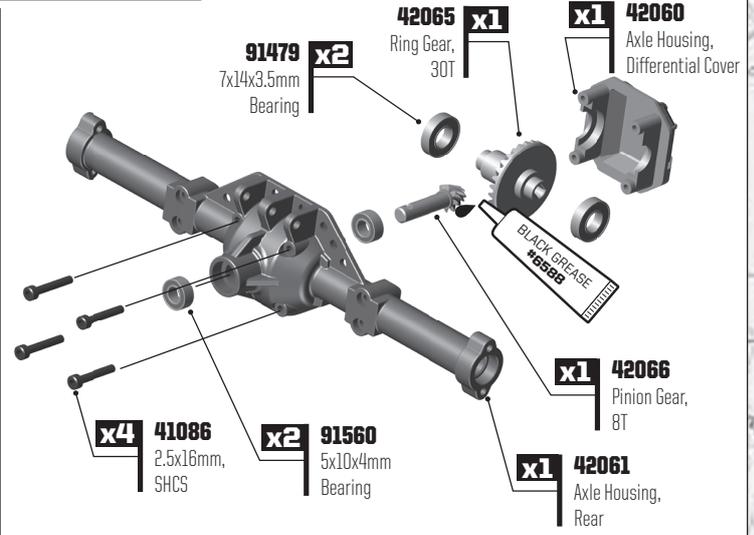


GATE 03 FRONT AXLE BUILD: BAG 5

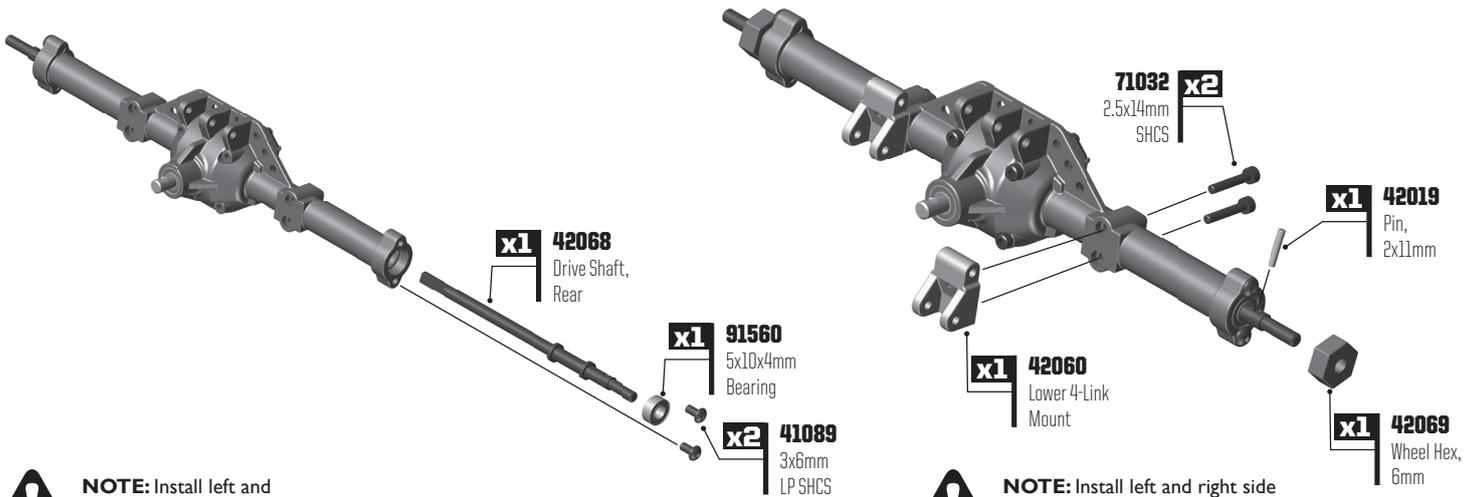


NOTE: Install left and right side wheel hexes

GATE 01 REAR AXLE BUILD: BAG 6



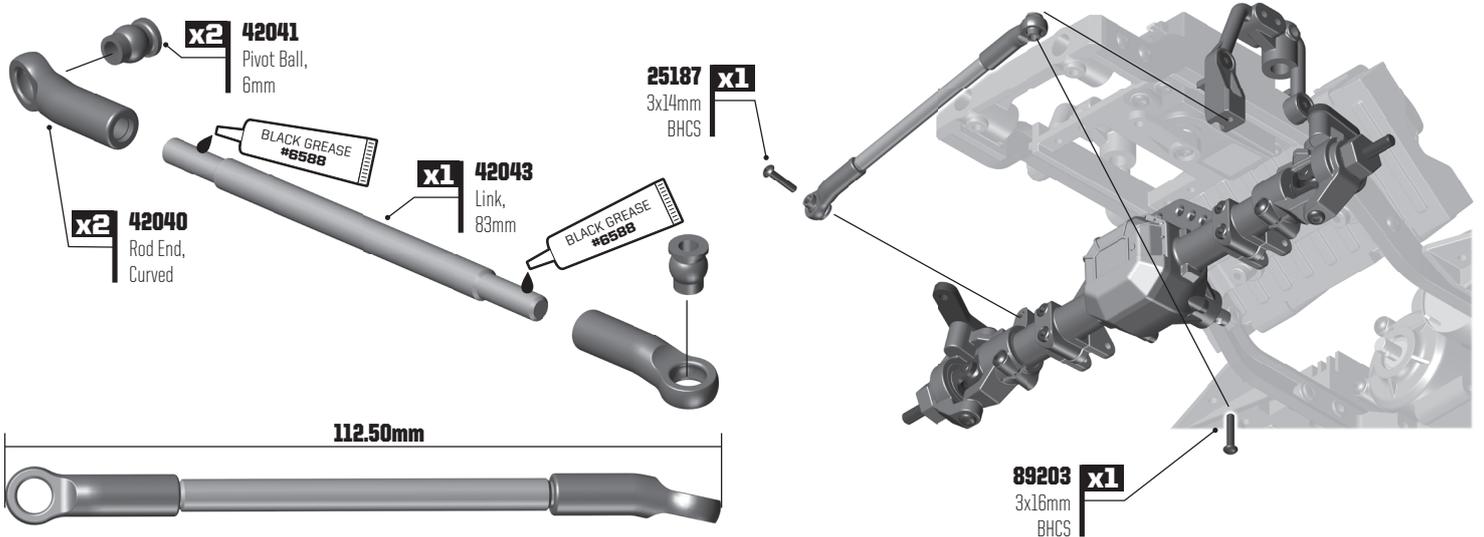
GATE 02 REAR AXLE BUILD: BAG 6



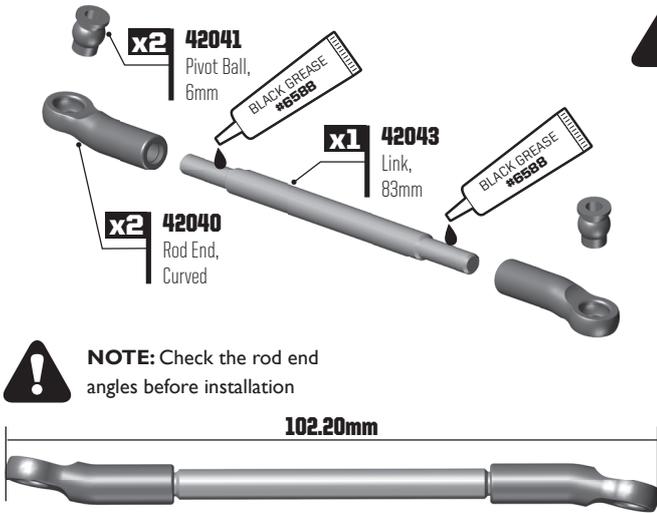
NOTE: Install left and right side drive shafts

NOTE: Install left and right side axle mounts and wheel hexes

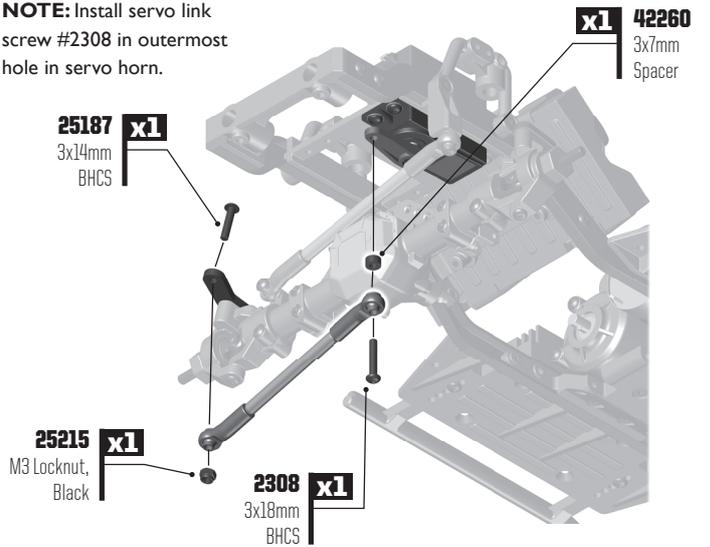
GATE 01 LINKS BUILD: BAG 7



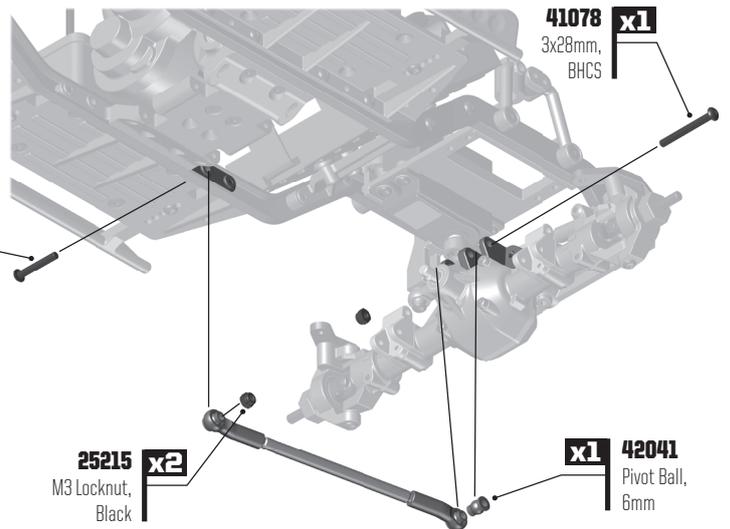
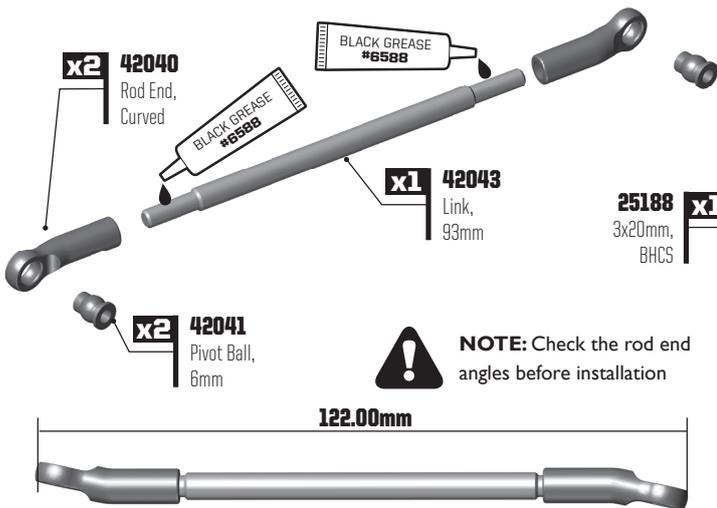
GATE 02 LINKS BUILD: BAG 7



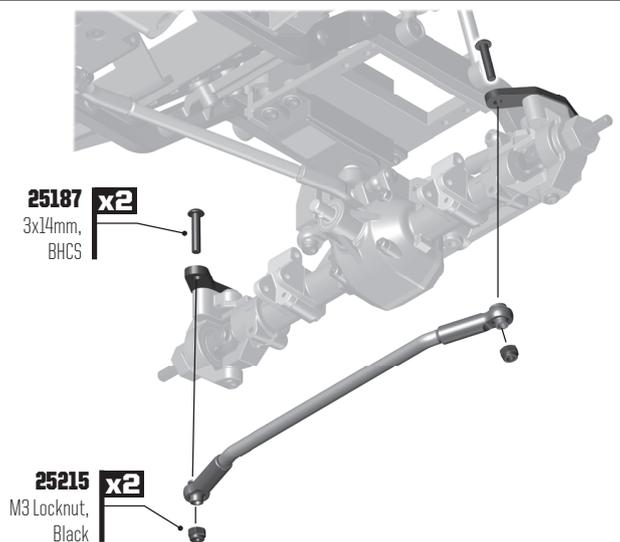
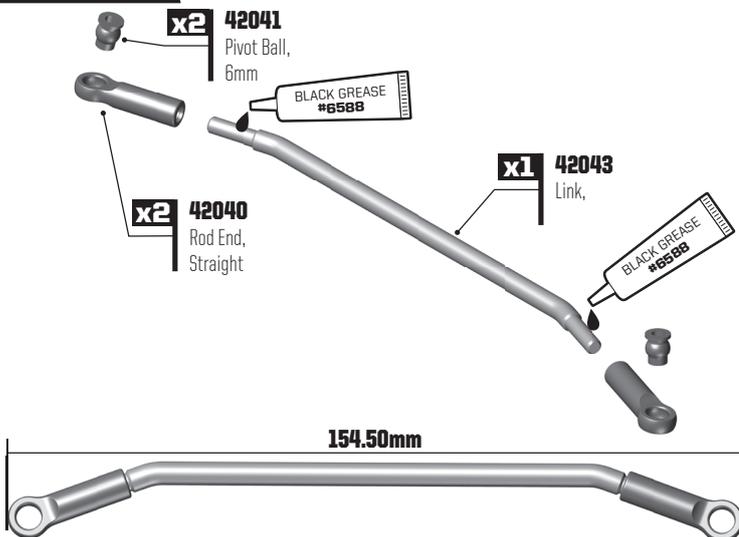
NOTE: Install servo link screw #2308 in outermost hole in servo horn.



GATE 03 LINKS BUILD: BAG 7



GATE 04 LINKS BUILD: BAG 7



GATE 05 LINKS BUILD: BAG 7

NOTE: Build and install two front lower links

x2 42041 Pivot Ball, 6mm

BLACK GREASE #6588

x2 42040 Rod End, Curved

x1 42043 Link, 100mm

BLACK GREASE #6588

NOTE: Check the rod end angles before installation

129.50mm

x1 25187 3x14mm, BHCS

x1 4689 3x16mm, Set Screw

GATE 06 LINKS BUILD: BAG 7

NOTE: Build and install two rear upper links

x2 42041 Pivot Ball, 6mm

BLACK GREASE #6588

x2 42040 Rod End, Curved

x1 42044 Link, 108mm

BLACK GREASE #6588

NOTE: Check the rod end angles before installation

150.00mm

x1 25188 3x20mm, BHCS

41078 **x1** 3x28mm BHCS

x2 25215 M3 Locknut, Black

GATE 07 LINKS BUILD: BAG 7

NOTE: Build and install two rear lower links

x2 42041 Pivot Ball, 6mm

BLACK GREASE #6588

x2 42040 Rod End, Curved

x1 42044 Link, 114mm

BLACK GREASE #6588

NOTE: Check the rod end angles before installation

156.00mm

x1 25187 3x14mm BHCS

x1 4689 3x16mm, Set Screw

GATE 01 DRIVE SHAFT BUILD: BAG 8

Parts List:

- x2 42021 Pin, 2x11mm
- x1 42020 Drive Shaft, Female (33mm, 42mm)
- x2 31532 3x8mm BHCS
- 42021 Drive Shaft, Male, CVA
- x2 42021 Drive Shaft, Female, CVA
- x2 42021 Drive Shaft Barrel
- 2x THREAD LOCK #1596
- x1 42020 Pin Retainer, Short
- x1 42020 Drive Shaft, Male (48mm, 60mm)
- x1 42020 Gearbox Side
- x1 42020 Axle Side
- x1 42020 Pin Retainer, Long

Drive Shaft Lengths

	Front (mm)	Rear (mm)
Female 1	33	33
Female 2	33	42
Male	48	60

NOTE: Build a front and rear drive shaft

GATE 02 DRIVESHAFT BUILD: BAG 8

NOTE: Install the front drive shaft

NOTE: Install the rear drive shaft

GATE 03 DRIVESHAFT BUILD: BAG 8

NOTE: Make sure the screw pins are aligned with each female CVA during assembly

NOTE: Make sure the phasing of the drive shafts is correct when installing them to the axles and gearbox.

Correct Phasing

Incorrect Phasing

FRONT 33 48 33

REAR 42 60 33

42022 x4 Screw Pin

THREAD LOCK #1596

GATE 01 SHOCK BUILD: BAG 9

x1 42081 Shock Piston

x2 6299 E-Clip

x1 42083 Shock Shaft, 3x30mm

SHOCK CAP O-RING

SHOCK COLLAR O-RING

x1 42081 O-Ring, Small, Shock Cap

x1 42082 Shock Body, 10x32mm

x2 5407 O-Ring, Red

x1 42081 Shock O-Ring Spacer

x1 42080 Shock Bottom Cap

x1 42040 Enduro Rod Ends

SHOCK FLUID #5422

Pro Tip: Use #1105 Green Slime on O-Rings

NOTE: Build 4 complete shocks

GATE 02 SHOCK BUILD: BAG 9

Shock Bleeding Steps:

1. Pull shock shaft down.
2. Fill shock body 3/4 full with silicone fluid.
3. Slowly move the shock shaft up and down to remove air from under piston.
4. Wait for bubbles to come to surface.
5. Fill shock body to top with silicone fluid.
6. Place a drop of oil in the cap and on cap threads.
7. Install cap and tighten completely.
8. Slowly compress shaft all the way to the top. If there is pressure at the top of the stroke, there is too much oil or air. You must bleed it out.
9. Slowly pull shaft out.
10. Unscrew the cap 3/4 turn and tilt the shock at a slight angle.
11. Slowly compress the shaft to push out excess oil and air. You should see bubbles coming out from under the cap.
12. With the shaft compressed, tighten the cap and re-check for pressure at the top of the stroke. If there is still pressure, repeat steps 9 thru 11.

SHOCK FLUID #5422

x1 42080 Shock Cap, Enduro

NOTE: Build 4 complete shocks

Step 1-3 **Step 3-4** **Step 5-6** **Step 7** **Step 8-12**

GATE 03 SHOCK BUILD: BAG 9

NOTE: Seat O-Ring into the groove on the inside of the shock collar

x1 42081 O-Ring, Large, Shock Collar

x1 42079 Shock Collar, Black, Aluminum

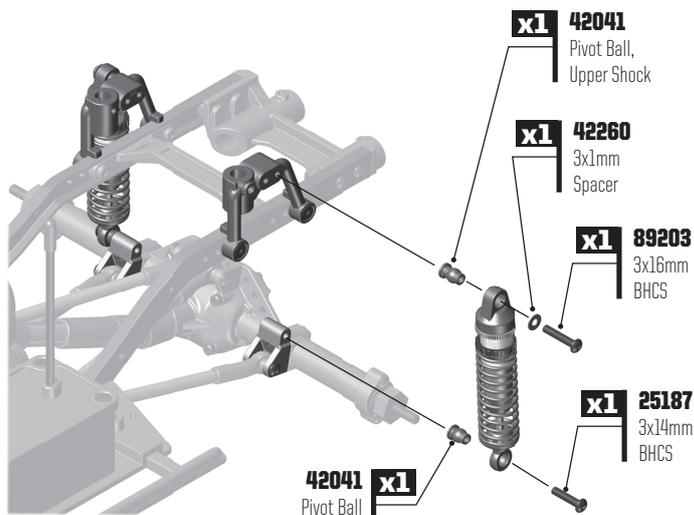
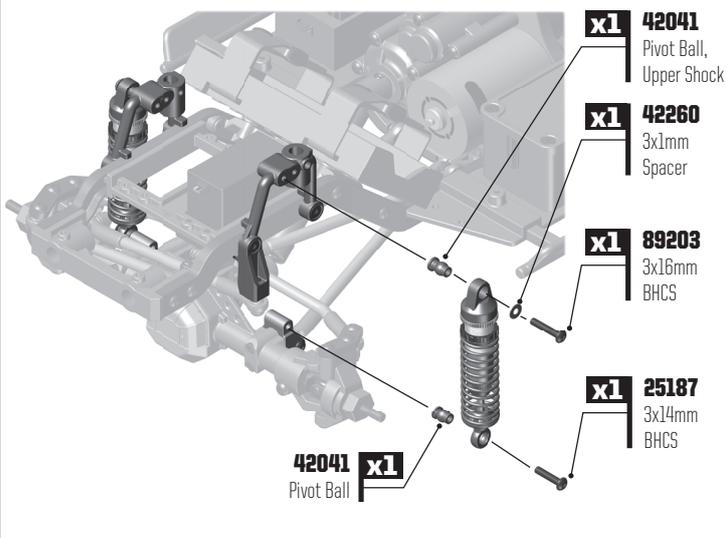
x1 42089 Shock Spring, Gray, 1.49 lb/in, 63mm

x1 42080 Shock Spring Cup

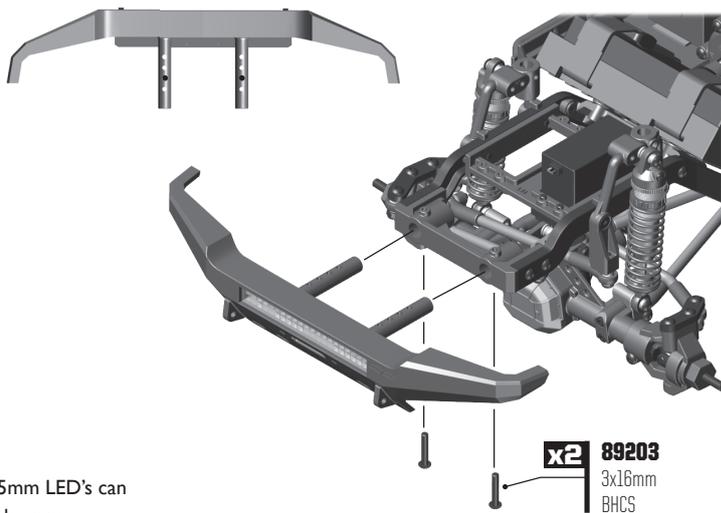
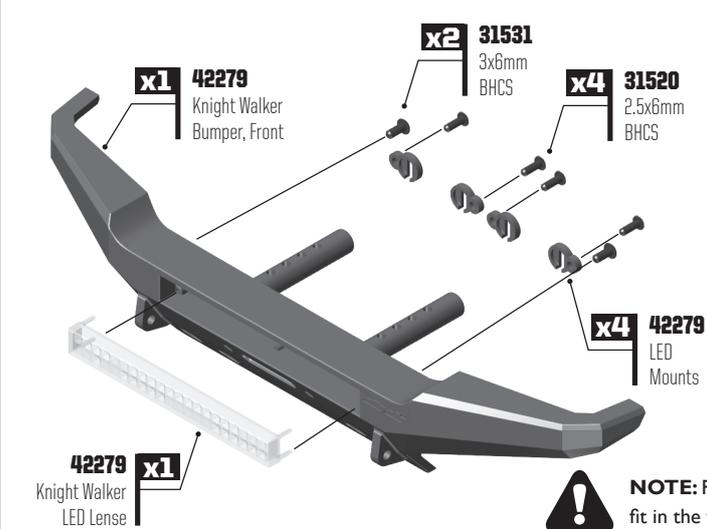
3mm

NOTE: Build 4 complete shocks

GATE 04 SHOCK BUILD: BAG 9

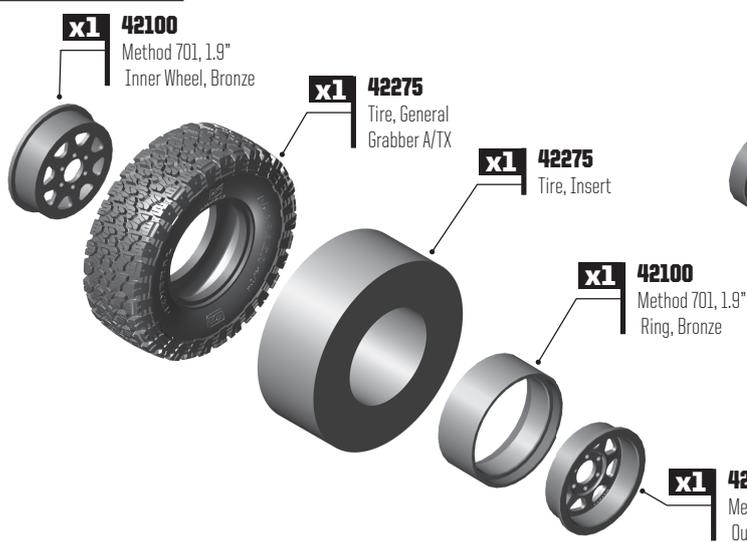


GATE 01 BUMPER BUILD: BAG 10

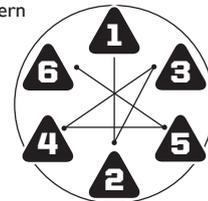


NOTE: Four 5mm LED's can fit in the front bumper

GATE 01 WHEEL/TIRE BUILD



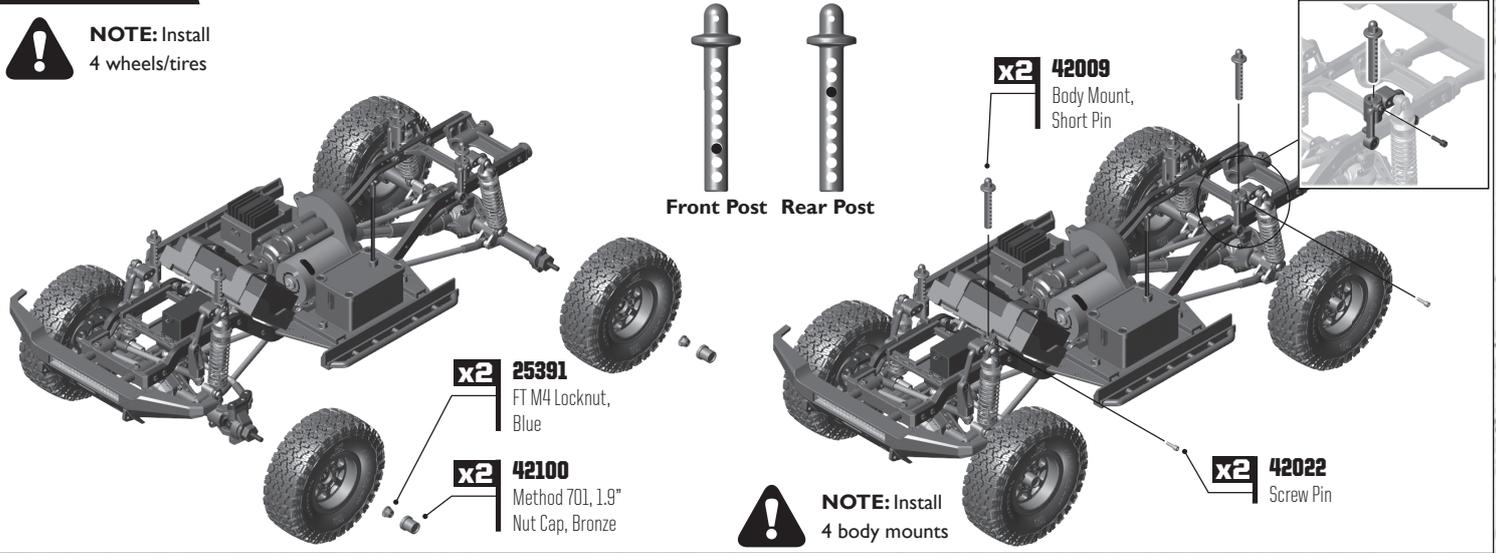
NOTE: Install #41088 screws in a crossing pattern



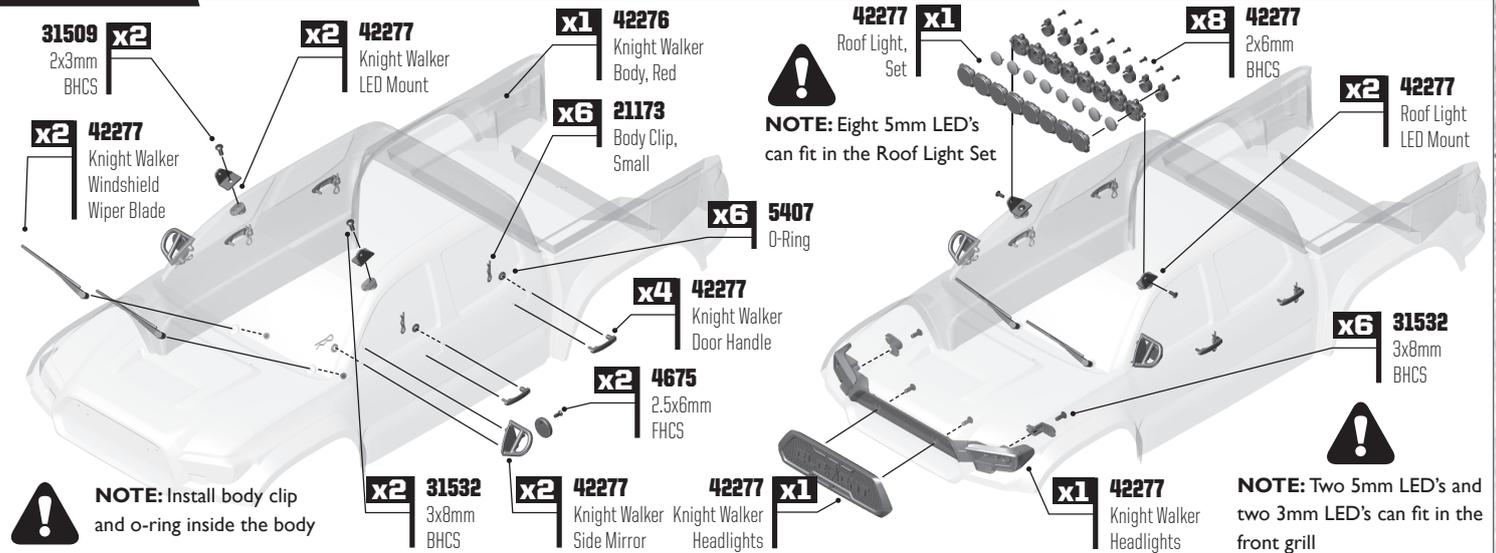
NOTE: Build 5 wheels/tires

GATE 02 WHEEL/TIRE BUILD

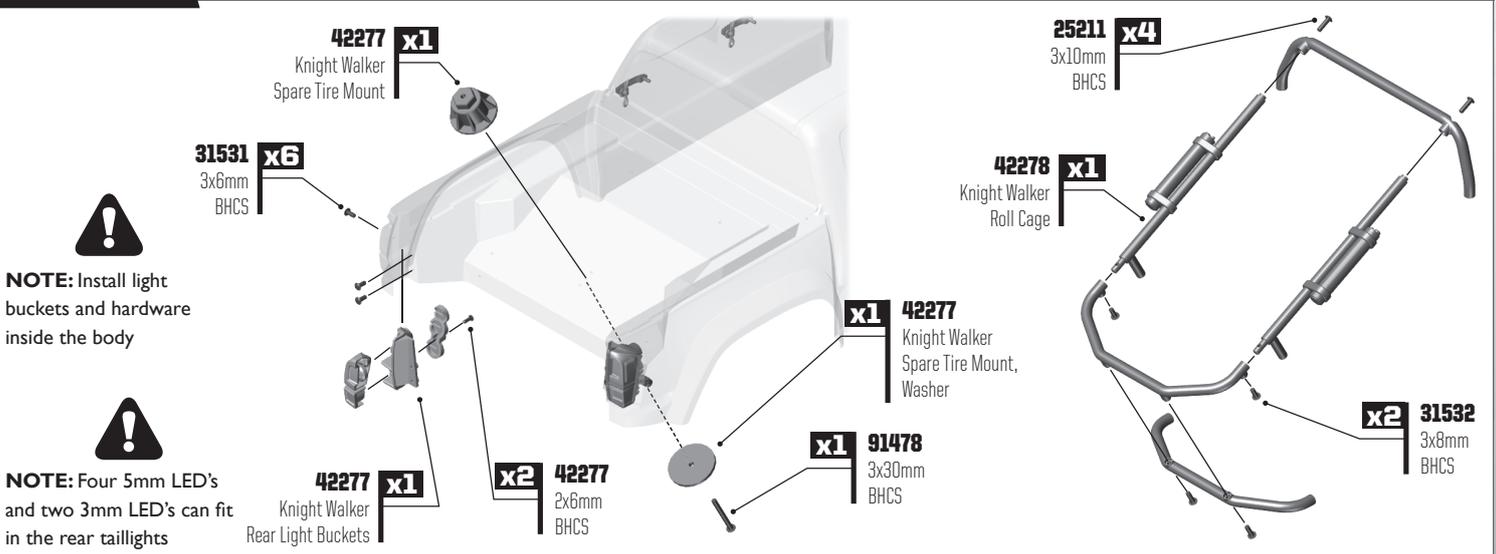
NOTE: Install 4 wheels/tires



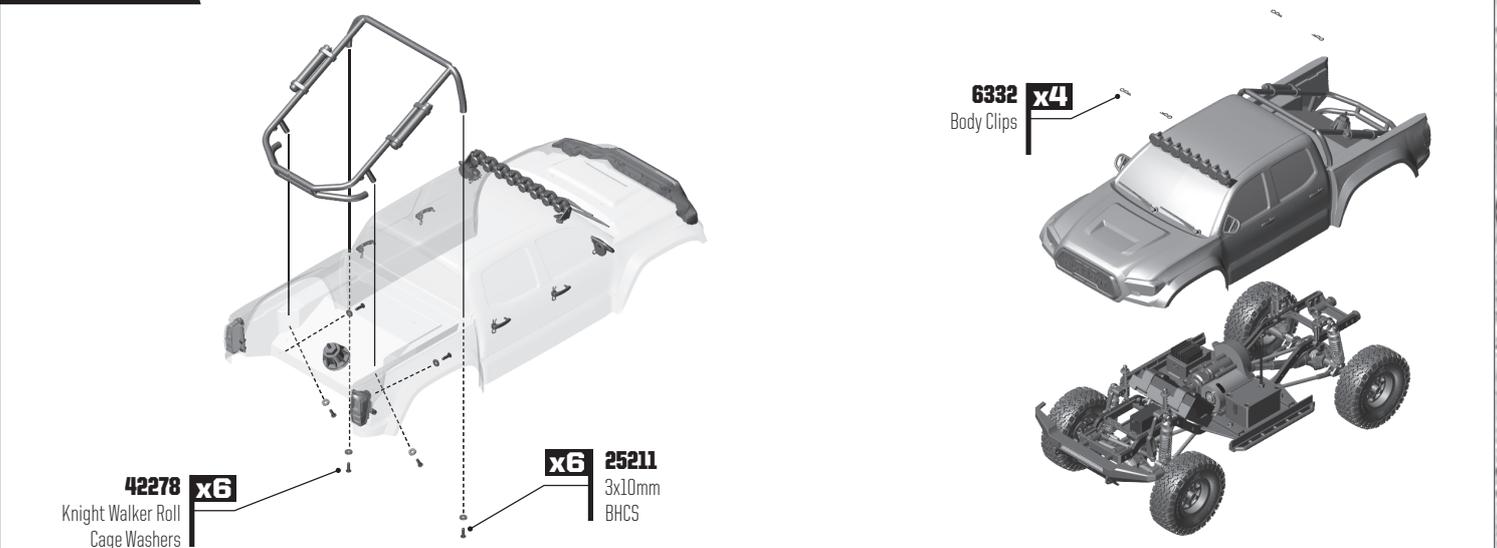
GATE 01 BODY BUILD: BAG 11



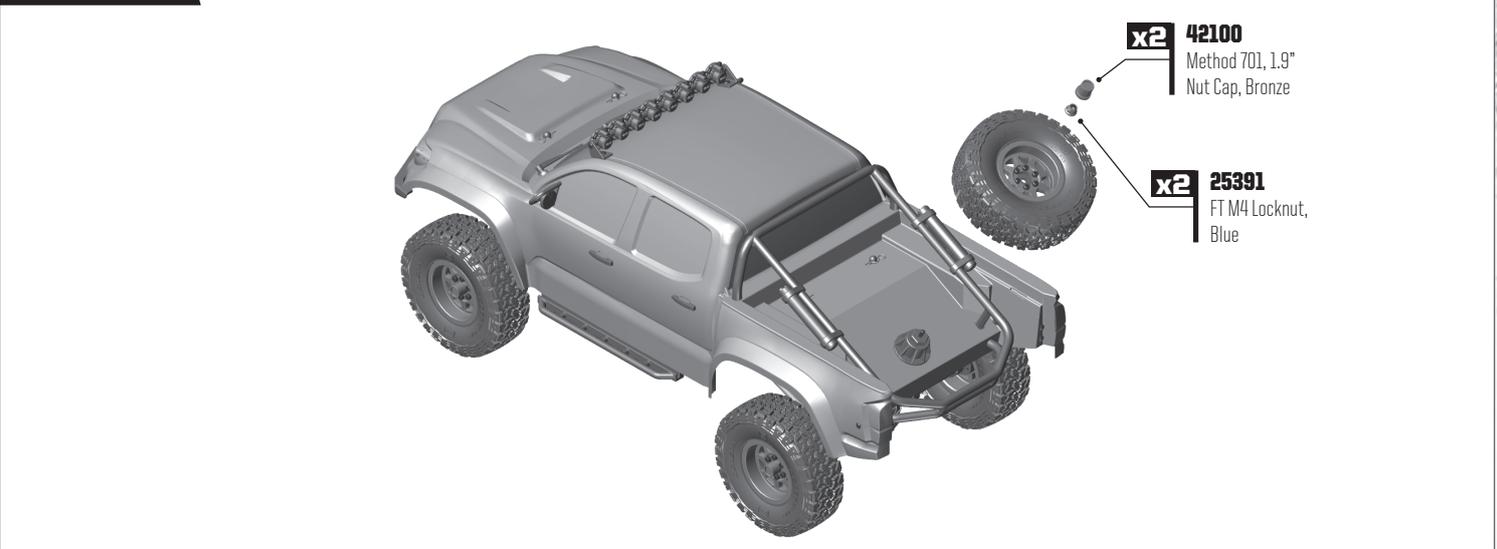
GATE 02 BODY BUILD: BAG 11



GATE 03 BODY BUILD: BAG 11



GATE 04 BODY BUILD: BAG 11



GATE 05

WHEELBASE CHART

WB	FRONT UPPER	FRONT LOWER	REAR UPPER	REAR LOWER
11.8"	93mm #42184	100mm #42185 #42186	93mm #42184	100mm #42185 #42186
12.0"	93mm #42184	100mm #42185 #42186	100mm #42185	108mm #42187 #42188
12.3"	93mm #42184	100mm #42185 #42186	108mm #42187	114mm #42189 #42190
12.8"	93mm #42184	100mm #42185 #42186	121mm #42191	127mm #42192 #42193



Items Needed for Links:

#42040 - Rod Ends

Panhard Links [CMS]: Servo on Axle Links [SOA]:

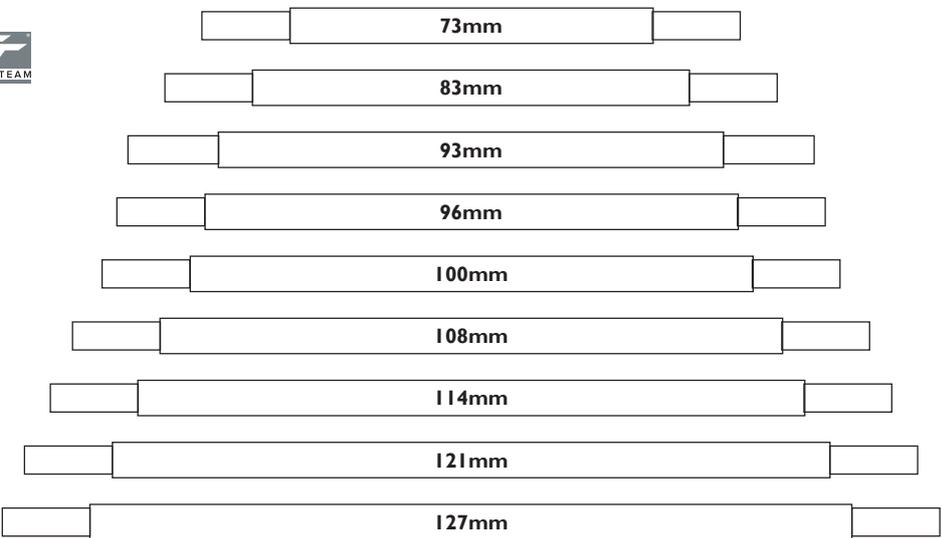
Panhard - #42183

Steering Input - #42182

Steering Link - #42180

Links - #42323

Steering Link - #42180



GATE 01 STEALTH X: BUILD CONFIGURATION: MOTOR MOUNT FACING REAR (STOCK)



OVERDRIVE:

Overdrive is a scenario where the front and rear wheels do not rotate at the same speed. The Stealth X gearbox is designed to allow the front wheels to spin faster than the rear wheels. Overdrive is advantageous when climbing up rock faces because the front tires will want to pull the vehicle up the rock. On deserts, the rear tires rotating slower than the front tires will help keep the chassis more stable and keep the rear tires planted on the ground.

Stealth X:

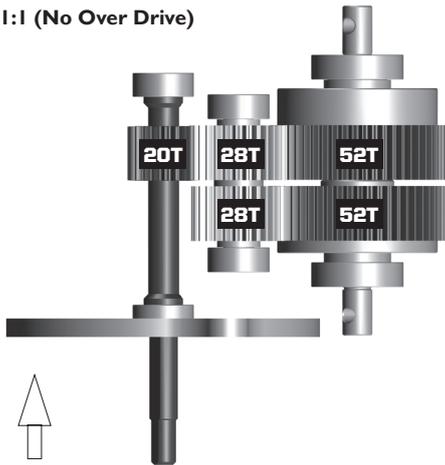
The Stealth X gearbox allows the driver to change the front to rear drive ratios with 3 separate ratio adjustments to the rear drive shaft. The driver has the option to flip the gearbox direction (motor mount facing the front) the optional inverse top shaft (#42024) is required.

Please Note:

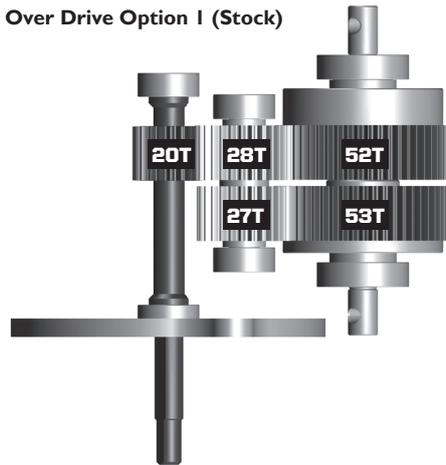
The 20T top shaft, 28T idler gear, and 52T drive gear will always be meshed together in all 6 gearbox configurations.

GATE 02 STEALTH X: BUILD CONFIGURATION: MOTOR MOUNT FACING REAR (STOCK)

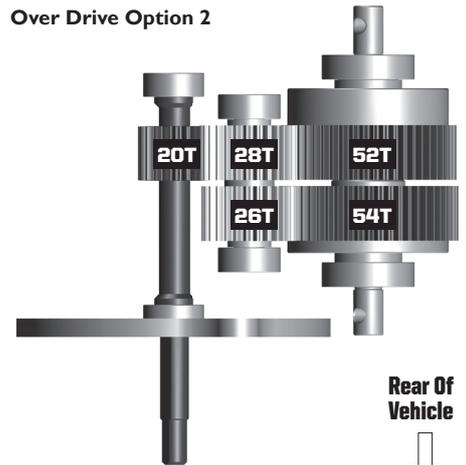
I:1 (No Over Drive)



Over Drive Option 1 (Stock)

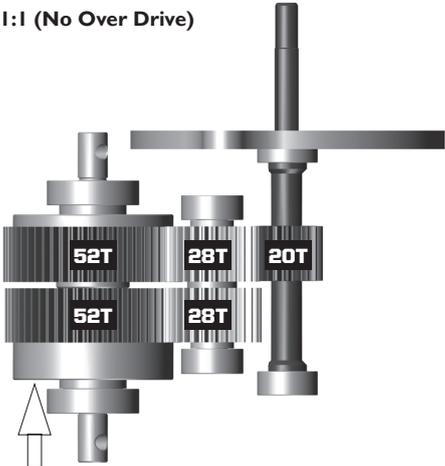


Over Drive Option 2

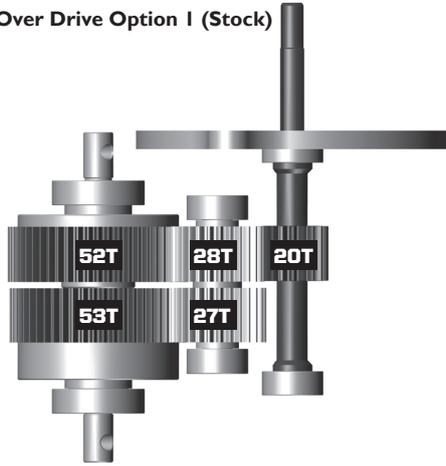


GATE 03 STEALTH X: BUILD CONFIGURATION: MOTOR MOUNT FACING FRONT (OPTIONAL - REQUIRES #42024 - TOP SHAFT)

I:1 (No Over Drive)

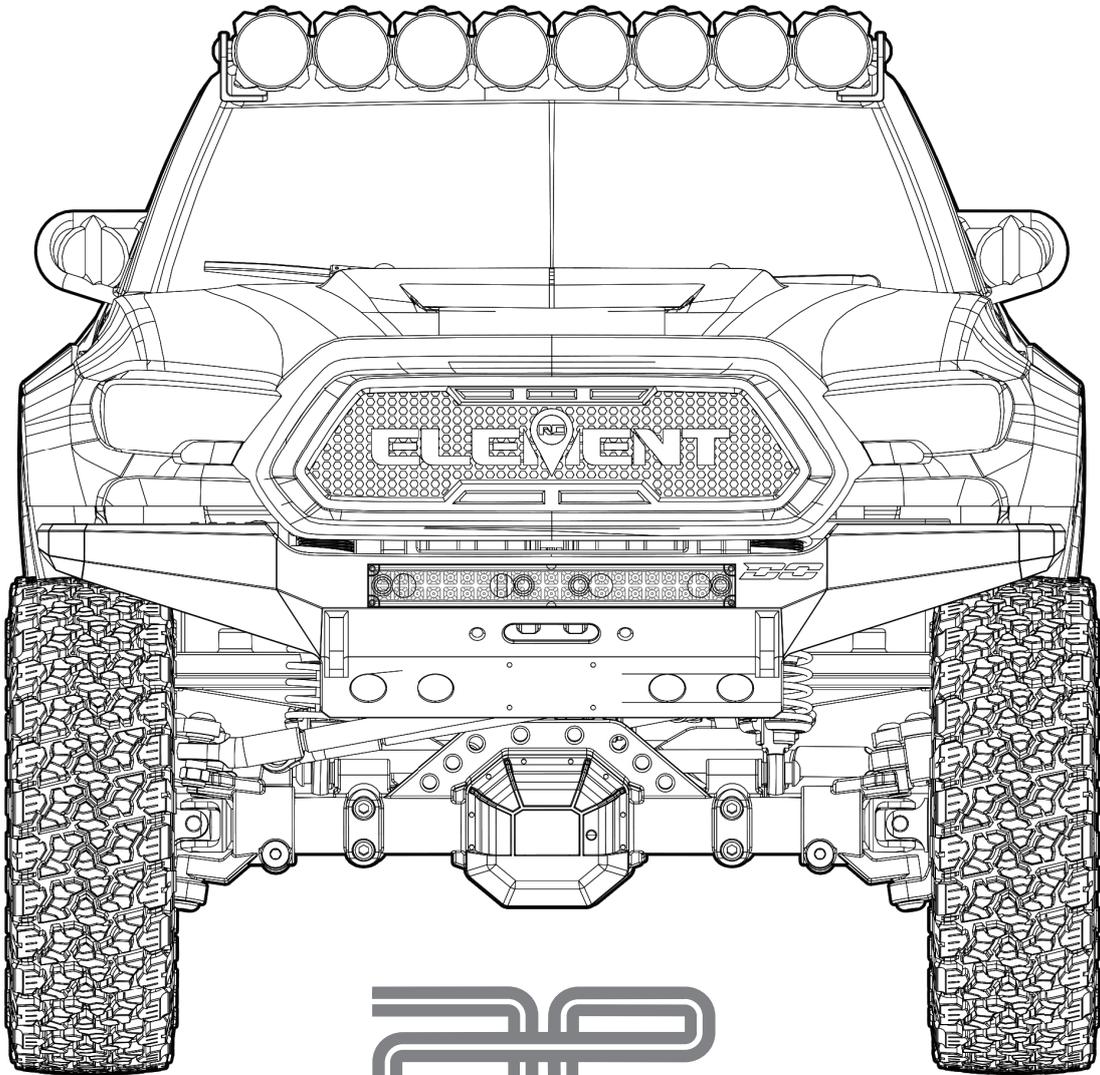


Over Drive Option 1 (Stock)



Over Drive Option 2





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