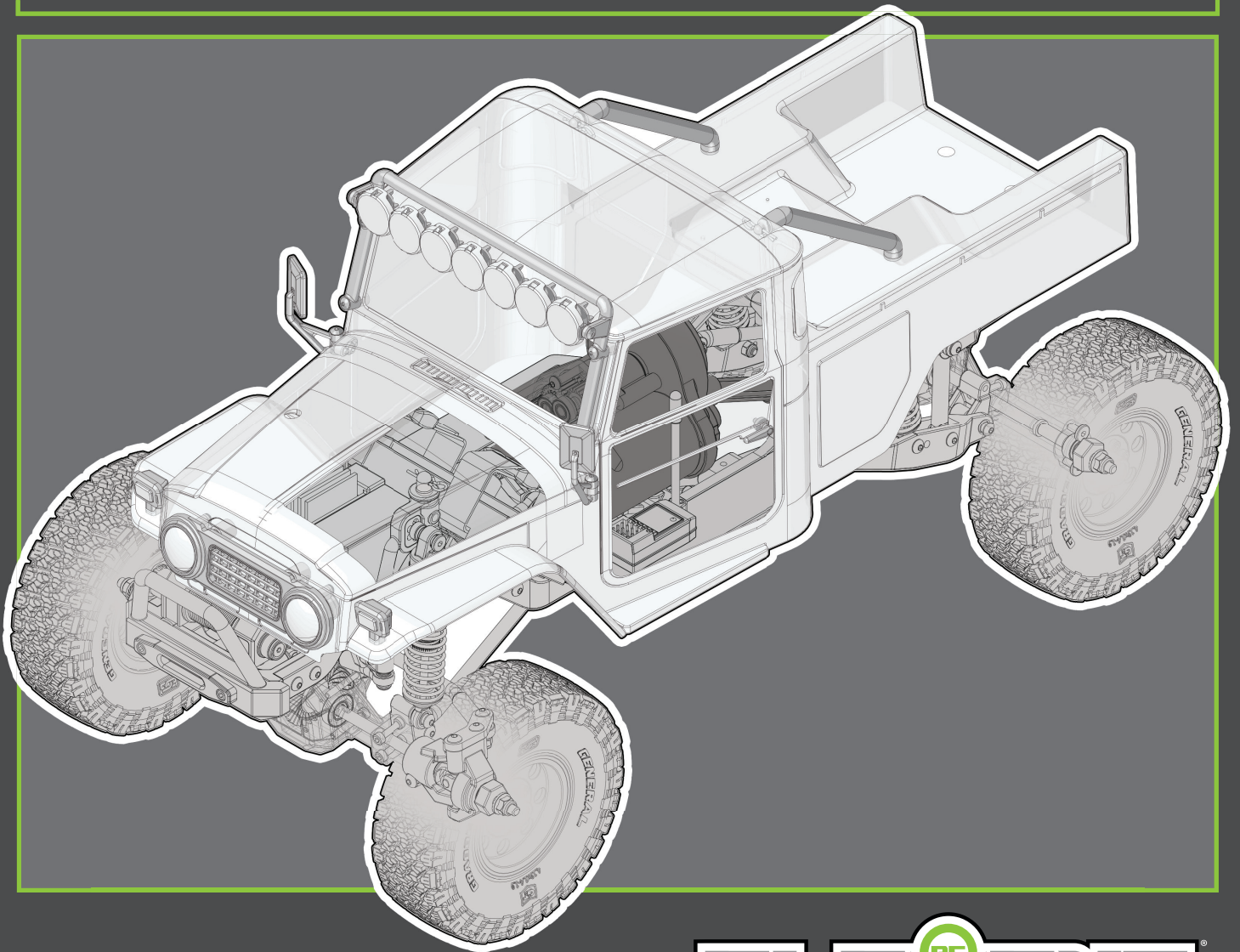


ENDURO

ZUUL
OFF-ROAD 4X4



OWNERS BUILD MANUAL





Associated Electrics, Inc.
21062 Bake Parkway.
Lake Forest, CA 92630

Customer Service
Tel: 949.544.7500
Fax: 949.544.7501

Follow Us On Social Media



ElementRC



@Element_RC

www.ElementRC.com

AE is a Registered Trademark of Associated Electrics, Inc.

TEAM ASSOCIATED is a Registered Trademark of Associated Electrics, Inc.

REEDY is a Registered Trademark of Associated Electrics, Inc.

FACTORY TEAM is a Registered Trademark of Associated Electrics, Inc.

ELEMENT™ is a Trademark of Associated Electrics, Inc.

AREA 51 is a Registered Trademark of Associated Electrics, Inc.

STEALTH is a Registered Trademark of Associated Electrics, Inc.

GREEN SLIME is a Registered Trademark of Associated Electrics, Inc.

ITEMS NEEDED

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

- 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 vehicle.

- Threadlock (#1596) *Not Included
- Green Slime (#1105) *Not Included

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.

ZUUL RTR

A PERFORMANCE RIG BUILT TO ENDURE. When hitting the trail, you want to do it with performance and confidence. So, we bring you the all-new Enduro Zuul Trail Truck RTR!

Aimed towards the serious RC rock crawler enthusiast, the new Enduro Zuul Trail Truck RTR is packed full of performance features that are sure to impress.

What makes the Enduro Zuul Trail Truck special? The all-new Gatekeeper Suspension package (GKS™)! This package consists of rear trailing arms that move the shocks forward, allowing a larger window for shock tuning and providing improved weight bias. The trailing arms are paired with a rear anti-roll bar for a more stable and consistent suspension when crawling on the rocks. An adjustable aluminum track bar mount firmly bolted to the chassis rail gives the Enduro Zuul more reliable and responsive steering without the flex. Our shock mount inserts with multiple mounting positions allow for precise suspension tuning, whether they're moving the shocks up, down, forward, or back.

The performance doesn't stop there. The Enduro Zuul Trail Truck is built on our proven stamped steel C-channel Enduro chassis and retains the same awesome features as before.

The behind-the-axle (BTA) steering link greatly improves approach angle and front-end clearance, making rough terrain much easier to handle. 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 and reliable power will not be an issue.

With all these amazing features packed in one box, we know the Enduro Zuul Trail Truck RTR is a high-performance rock crawling machine that's ready to take on the terrain. – Are you?









FEATURES

- Behind-the-axle (BTA) steering
- Aluminum steering plates
- CMS (Chassis Mounted Steering)
- Steel 25T servo horn
- Integrated servo winch mount
- Threaded aluminum shock bodies
- Stamped steel frame rails
- Aluminum motor plate
- Optimized ball cups for more fluid axle articulation
- Telescopic driveshafts front and rear
- Extruded aluminum driveshaft splines
- One-piece rear axle design
- Splined front axle with adjustable caster
- Universal front drive axles
- Machined input pinion gear
- Metal ring gear
- Machined steel top shaft
- Heavy duty 5mm diameter steel links
- Metal ball bearings
- 12mm steel wheel hexes
- Shock mount inserts
- Aluminum track bar that is mounting directly to the steel frame rail
- Adjustable front track bar
- GKS [trailing arm rear suspension]
- Anti-roll bar included for the rear








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)

	Aluminum (8566)
	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)

PIVOT BALLS

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



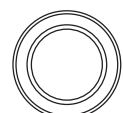
BUTTON HEAD SCREWS (BHCS)

	2.5x10mm (41088)
	3x5mm (31530)
	3x6mm (31531) Titanium (91580)
	3x8mm (31532) Titanium (91581)
	3x10mm (25211) Titanium (91582)
	3x12mm (89202) Titanium (91583)
	3x14mm (25187) Titanium (91584)
	3x16mm (89203) Titanium (91585)
	3x18mm (2308)
	3x20mm (25188) Titanium (91587)
	3x22mm (25189)
	3x24mm (89204)
	3x28mm (41078)







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

	3x7mmx1mm (42260)
	3x7mmx2mm (42260)
	3x7x3mm (42260)
	3x7x5mm (42260)
	3x7x7mm (42260)
	Drive Gear Shim (42027)

MISC. SCREWS

	Shoulder Screw 3x4x10mm (42070)
	Screw Pin (42022)

LINKS







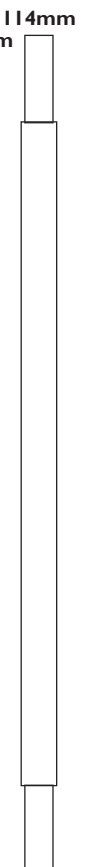
	73mm
	83mm
	93mm
	96mm
	100mm
	108mm
	114mm

TABLE OF CONTENTS

5/8/2023

01	COVER	12	DRIVESHAFTS BUILD (BAG 8)
02	INTRODUCTION	13	SHOCKS BUILD (BAG 9)
03	1:1 HARDWARE "FOLD OUT"	15	CAGE BUILD (BAG 10)
04	TABLE OF CONTENTS	16	TRAIL TIPS
05	CHASSIS BUILD (BAG 1, 2)	17	OPTIONAL GEARBOX BUILD
06	ELECTRONIC MOUNTS BUILD (BAG 3)	18	BACK COVER
06	GEARBOX BUILD (BAG 4)		
08	FRONT AXLES BUILD (BAG 5)		
08	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.



This symbol indicates where Thread Lock Adhesive should be applied.



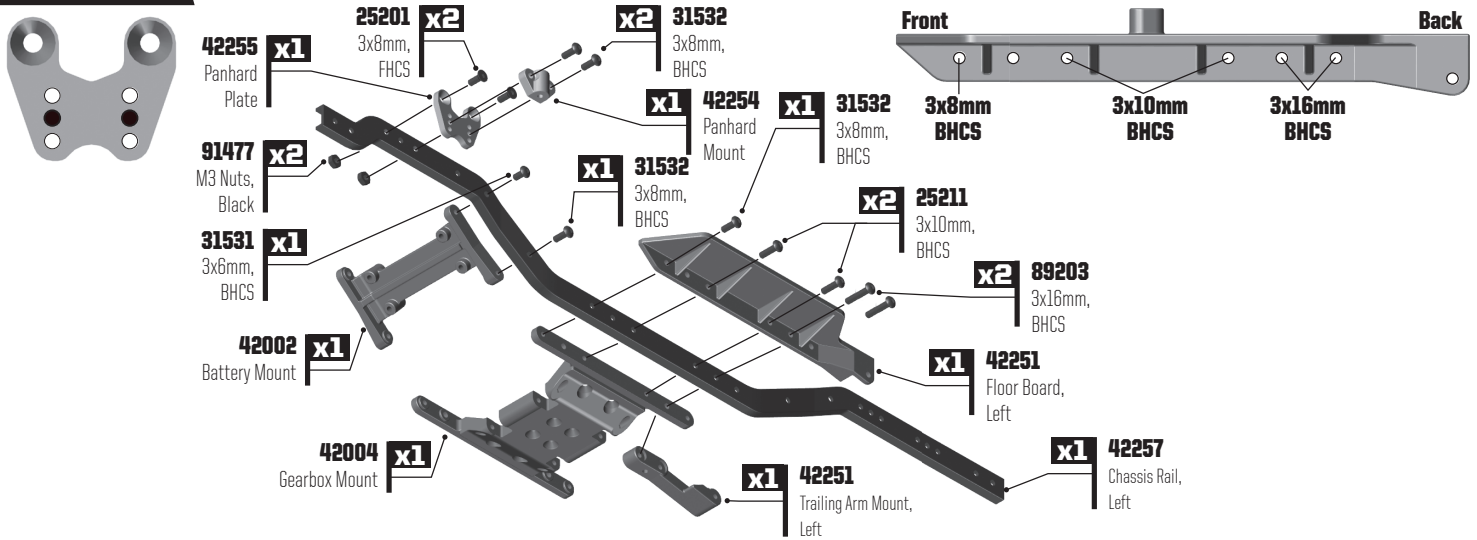
This symbol indicates where Shock Fluid should be applied.



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.

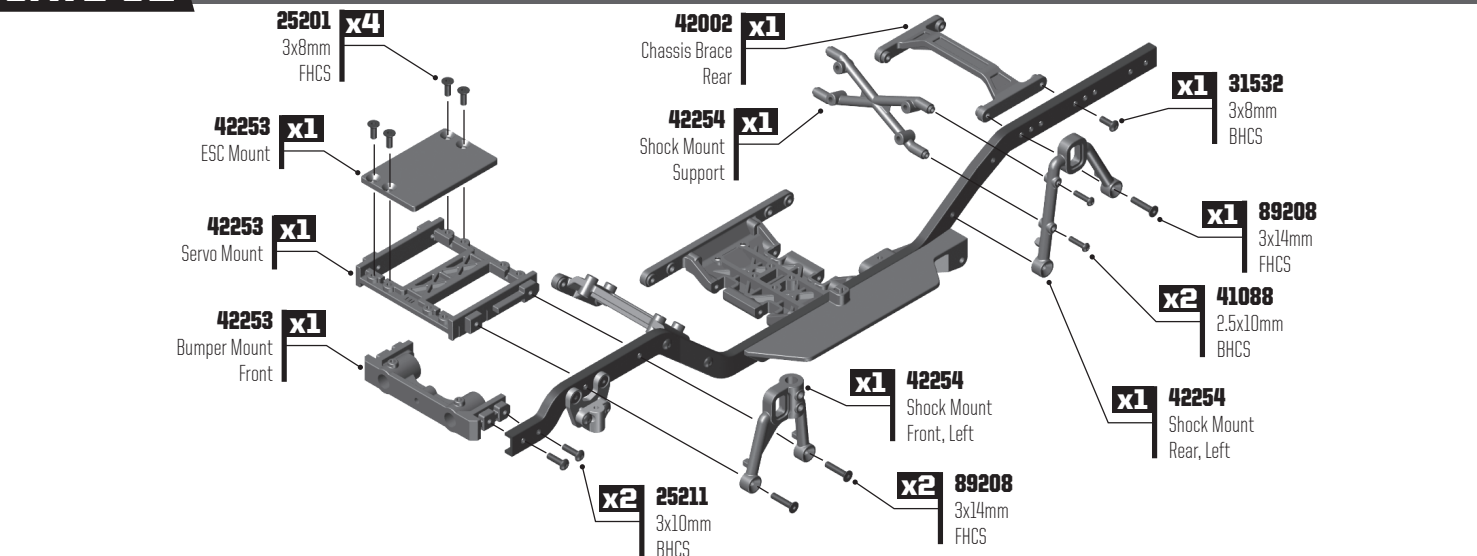
GATE 01

CHASSIS BUILD: BAGS 1, 2



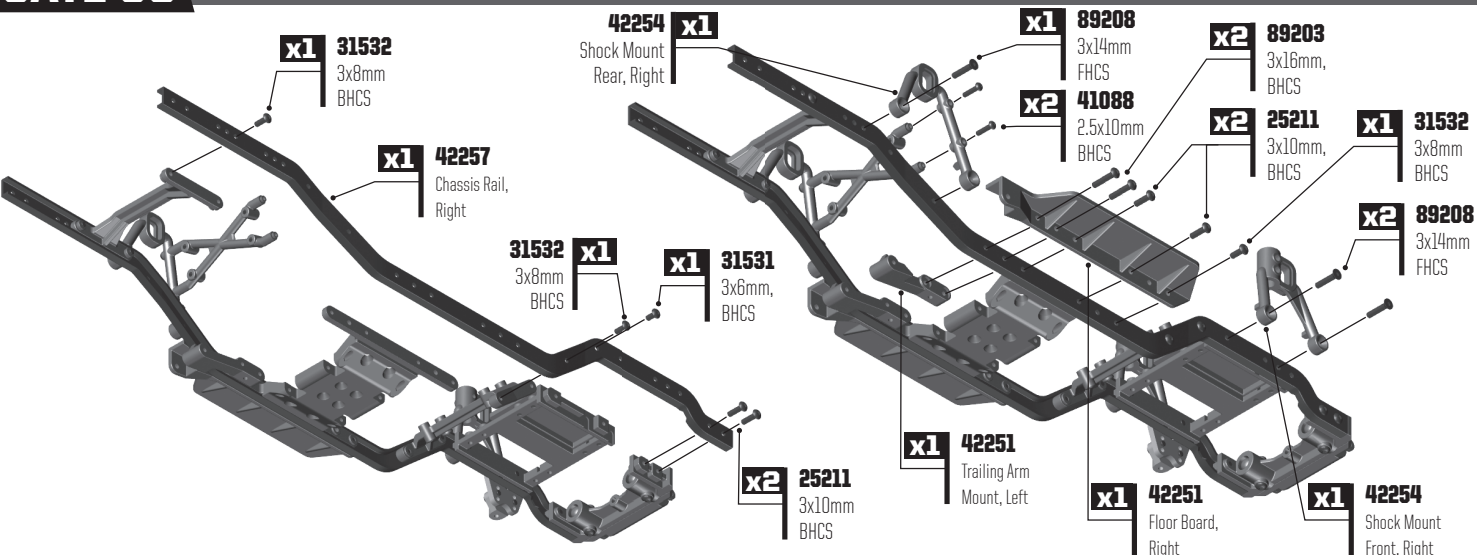
GATE 02

CHASSIS BUILD: BAGS 1, 2

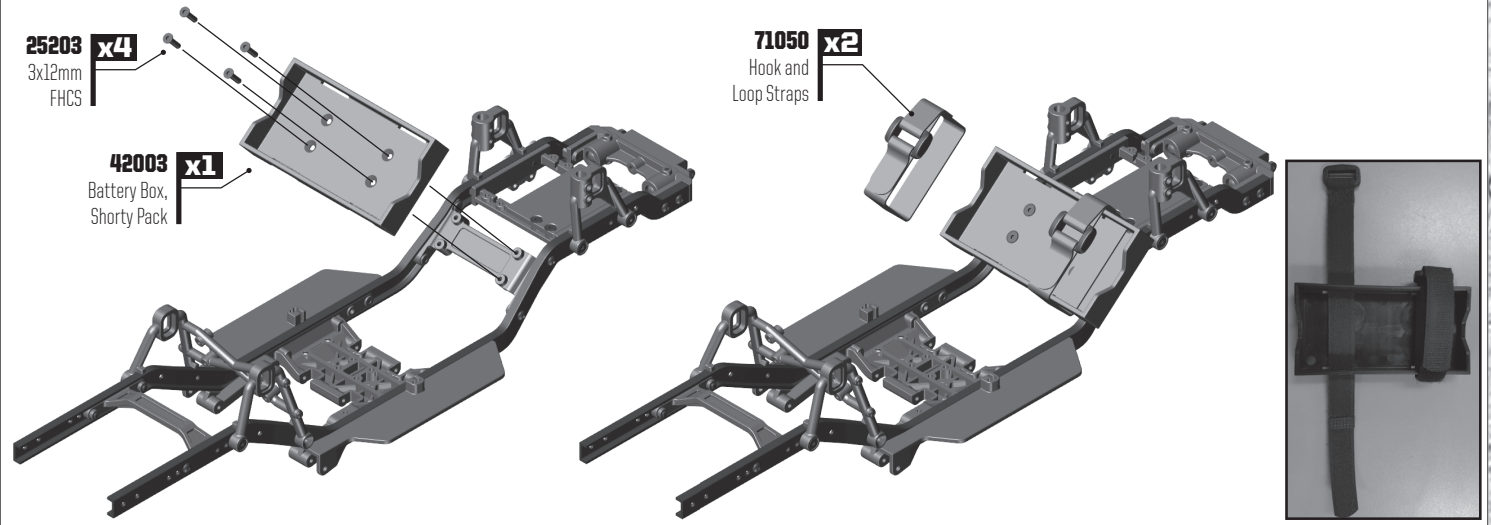


GATE 03

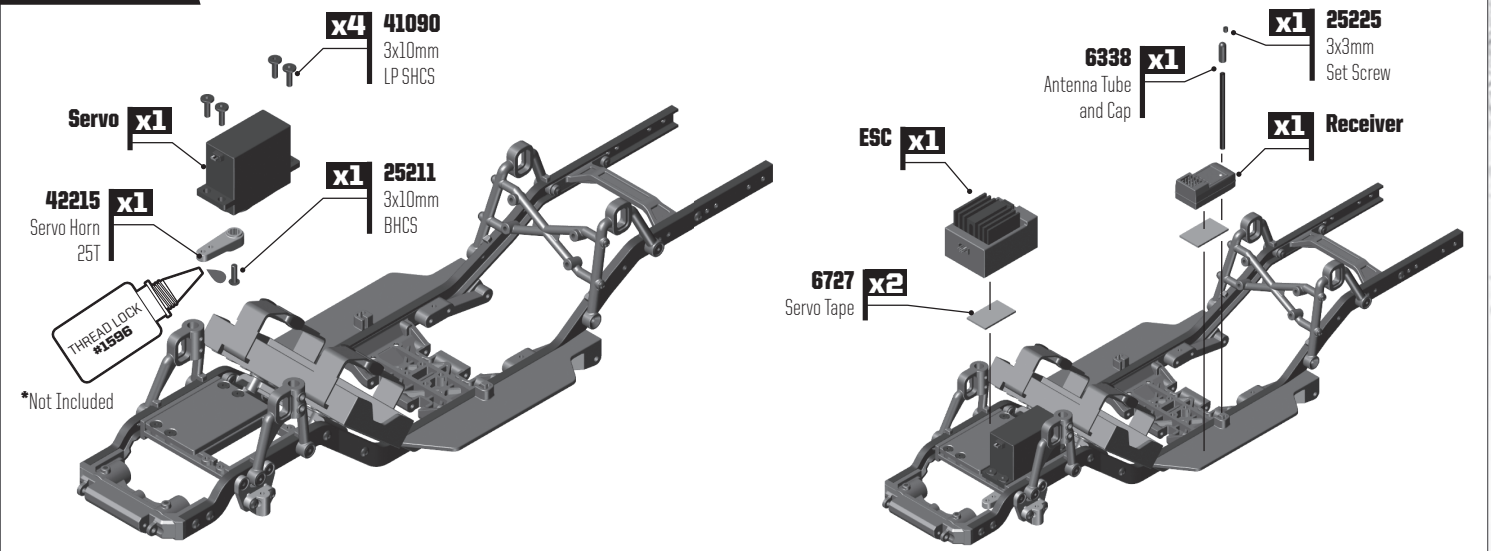
CHASSIS BUILD: BAGS 1, 2



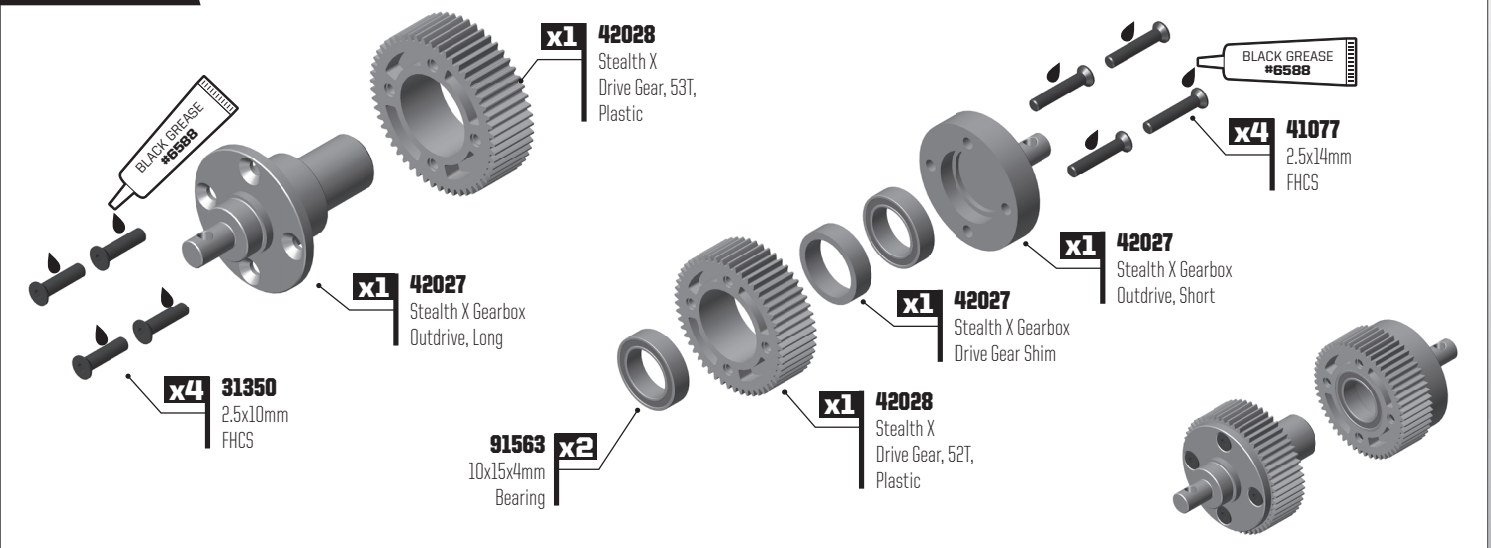
GATE 01 ELECTRONIC MOUNTS BUILD: BAG 3



GATE 02 ELECTRONIC MOUNTS BUILD: BAG 3



GATE 01 GEARBOX BUILD: BAG 4



GATE 02 GEARBOX BUILD: BAG 4

42025 x2
Idler Shaft Pin
2x9mm

42025 x1
Stealth X Gearbox
Idler Shaft

42026 x1
Stealth X Idler
Gear, 27T

42026 x1
Stealth X Idler
Gear, 28T

91560 x4
5x10x4mm
Bearing

42030 x1
Stealth X Gearbox
Top Shaft, Rear

41078 x5
3x28mm
BHCS

42023 x1
Stealth X Gearbox
Case

91563 x2
10x15x4mm
Bearing

42023 x1
Stealth X Gearbox
Case

NOTE: There are optional gearbox builds on page 28

Over Drive Option I (Stock)

BLACK GREASE
16558

GATE 03 GEARBOX BUILD: BAG 4

42029 x1
Stealth X Gearbox
Motor Plate

25201 x3
3x8mm
FHCS

42023 x2
Stealth X Gearbox
Spur Gear Hub

41090 x2
3x10mm
LP BHCS

25391 x1
FT M4 Locknut

9654 x1
Spur Gear
48P, 87T

Motor x1

GATE 04 GEARBOX BUILD: BAG 4

42023 x1
Stealth X Gearbox
Gear Cover

1336 x1
Pinion Gear
18T
*Not Included

25225 x1
3x3mm
Set Screw
*Not Included

31530 x2
3x5mm
BHCS

NOTE: Make sure the gear mesh between the spur gear and pinion has a slight amount of movement between the two gears.

89208 x2
3x14mm
FHCS

25201 x2
3x8mm
FHCS

GATE 01 FRONT AXLE BUILD: BAG 5

91560 x2
5x10x4mm Bearing

91474 x2
7x14x3.5mm Bearing

BLACK GREASE #6588

41086 x4
2.5x16mm SHCS

42066 x1
Pinion Gear, 8T

42061 x1
Axle Housing, Front

42065 x1
Ring Gear, 30T

42060 x1
Axle Housing Differential Cover

42062 x1
Caster Block, Left

91560 x1
5x10x4mm Bearing

NOTE: Align the two arrows when installing the caster block!

NOTE: Install Left and right side caster blocks and bearings

GATE 02 FRONT AXLE BUILD: BAG 5

NOTE: Do not overtighten screws!

25187 x1
3x14mm BHCS

42067 x1
Universal, 80mm

91563 x1
10x15x4mm Bearing

91560 x1
5x10x4mm Bearing

42062 x1
Steering Block

71032 x2
2.5x14mm SHCS

42060 x1
Lower 4-Link Mount

42070 x2
3x4x10mm Shoulder Screw

NOTE: Install left and right side steering blocks and universals

NOTE: Install left and right side axle mounts and shoulder screws

GATE 03 FRONT AXLE BUILD: BAG 5

25211 x4
3x10mm BHCS

42064 x1
Steering Plate, Right

42064 x1
Steering Plate, Left

42019 x1
Wheel Hex Pin, 2x11mm

42069 x1
Wheel Hex, 6mm

NOTE: Install left and right side wheel hexes

GATE 01 REAR AXLE BUILD: BAG 6

91474 x2
7x14x3.5mm Bearing

42065 x1
Ring Gear, 30T

42060 x1
Axle Housing, Differential Cover

BLACK GREASE #6588

42066 x1
Pinion Gear, 8T

42061 x1
Axle Housing, Rear

41086 x4
2.5x16mm, SHCS

91560 x2
5x10x4mm Bearing

GATE 02 REAR AXLE BUILD: BAG 6

x1 42068 Driveshaft, Rear, 80mm

x1 91560 5x10x4mm Bearing

x2 41089 3x6mm LP SHCS

x2 71032 2.5x14mm SHCS

x1 42060 Lower 4-Link Mount

x1 42019 Wheel Hex Pin, 2x11mm

x1 42069 Wheel Hex, 6mm

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

x2 42041 Pivot Ball, 6mm

x2 42040 Rod End, Curved

x1 42043 Link, 83mm

BLACK GREASE #6588

25187 3x14mm BHCS

x1 89203 3x16mm BHCS

112.50mm

GATE 02 LINKS BUILD: BAG 7

x2 42041 Pivot Ball, 6mm

x2 42040 Rod End, Curved

x1 42043 Link, 73mm

BLACK GREASE #6588

25187 3x14mm BHCS

x1 42260 Spacer 7mm

25215 M3 Locknut, Black

x2 25188 3x20mm BHCS

THREAD LOCK #1596

NOTE: Check the rod end angles before installation

102.20mm

GATE 03 LINKS BUILD: BAG 7

x2 42040 Rod End, Curved

BLACK GREASE #6588

x1 42043 Link, 93mm

BLACK GREASE #6588

x2 42041 Pivot Ball, 6mm

NOTE: Check the rod end angles before installation

122.00mm

x1 25188 3x20mm, BHCS

x1 41078 3x28mm, BHCS

x2 25215 M3 Locknut, Black

x1 42054 FT Pivot Ball, Steel, 6mm

GATE 04 LINKS BUILD: BAG 7

x2 42041 Pivot Ball, 6mm

BLACK GREASE #6588

x2 42040 Rod End, Straight

x1 42043 Steering Link

BLACK GREASE #6588

154.50mm

x2 25187 3x14mm, BHCS

x2 25215 M3 Locknut, Black

GATE 05 LINKS BUILD: BAG 7

x2 42041 Pivot Ball, 6mm

BLACK GREASE #6588

x2 42040 Rod End, Curved

x1 42043 Link, 100mm

BLACK GREASE #6588

NOTE: Build and install two front lower links

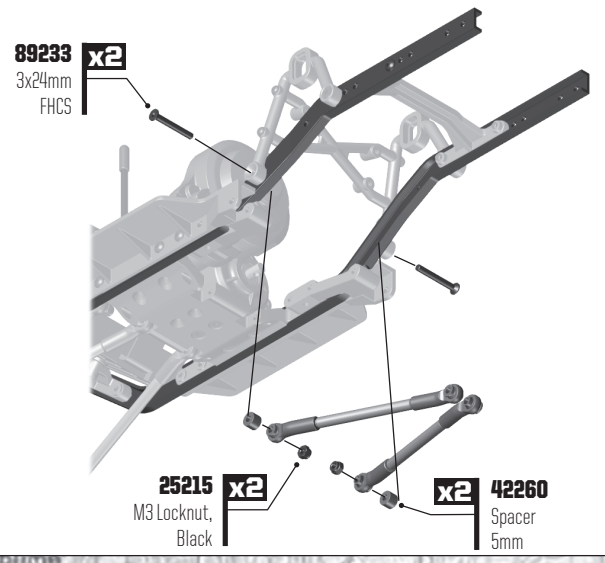
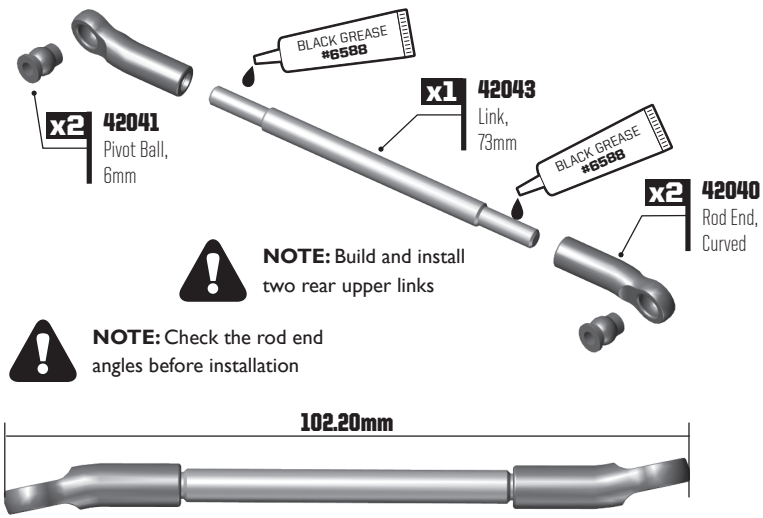
NOTE: Check the rod end angles before installation

129.50mm

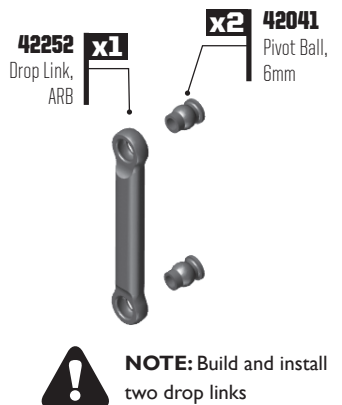
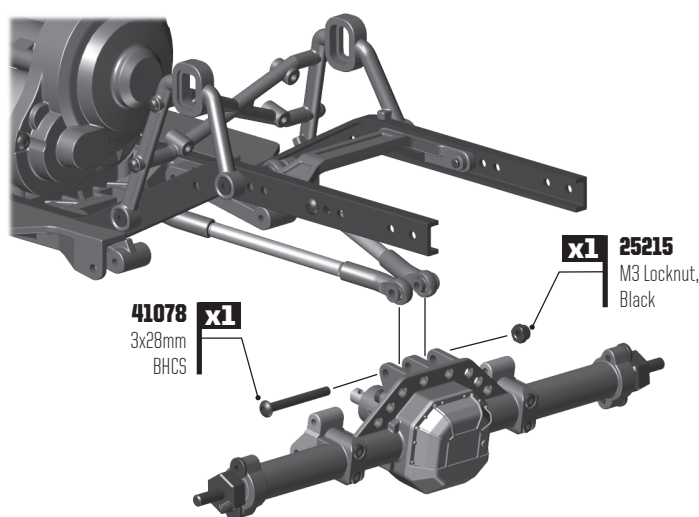
x1 25187 3x14mm, BHCS

x1 4689 3x16mm, Set Screw

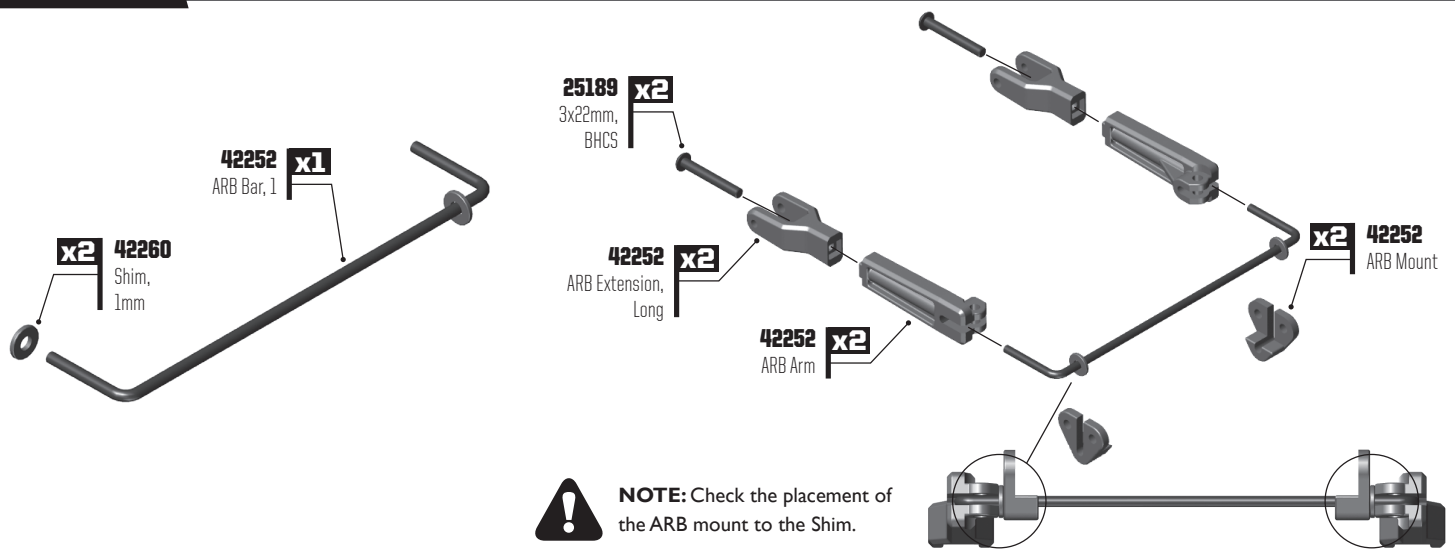
GATE 06 LINKS BUILD: BAG 7



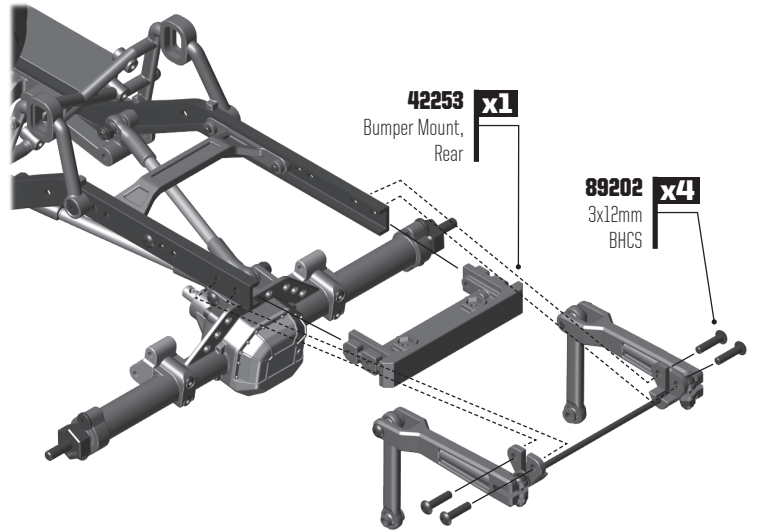
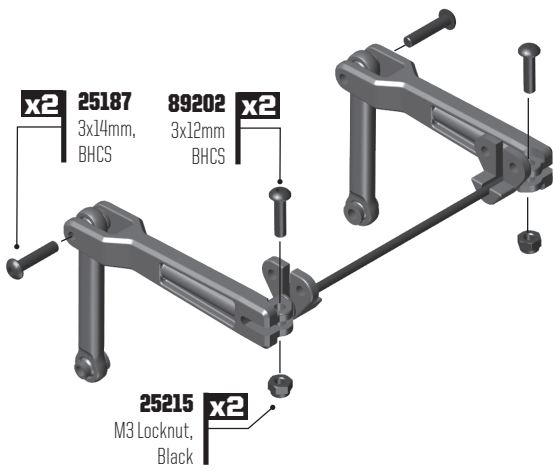
GATE 07 LINKS BUILD: BAG 7



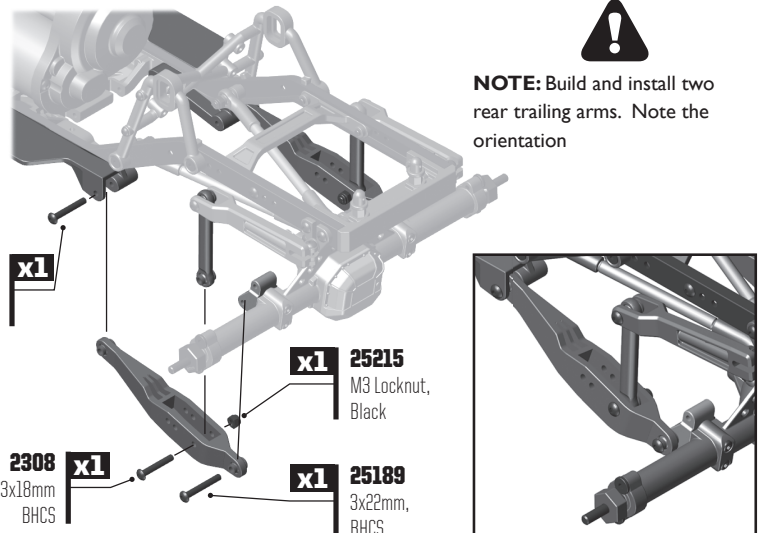
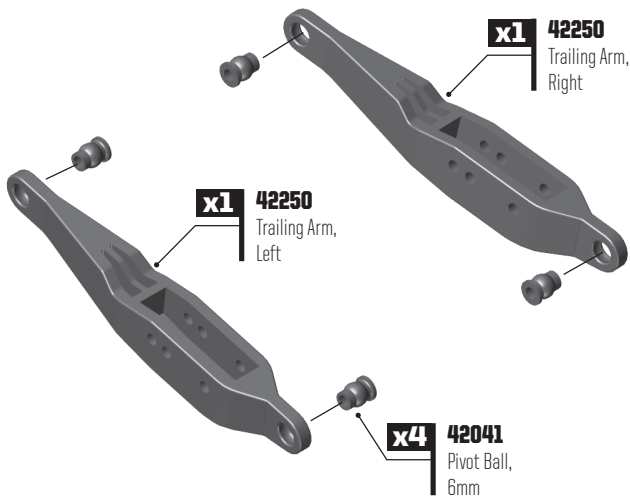
GATE 08 LINKS BUILD: BAG 7



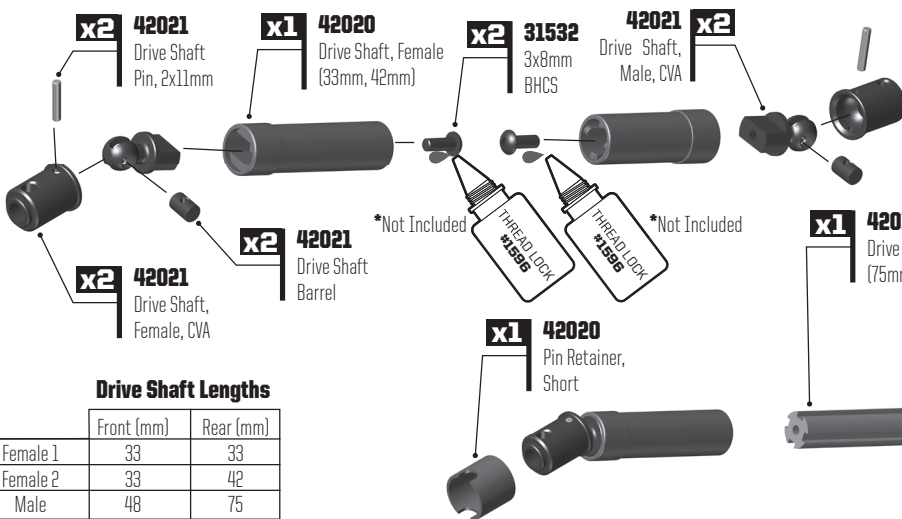
GATE 09 LINKS BUILD: BAG 7



GATE 10 LINKS BUILD: BAG 7

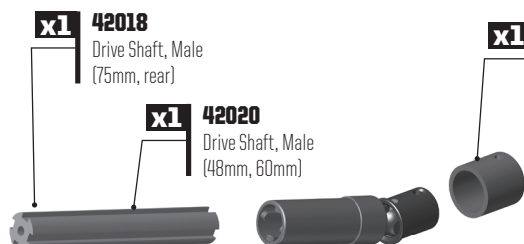


GATE 01 DRIVE SHAFT BUILD: BAG 8



Drive Shaft Lengths

	Front (mm)	Rear (mm)
Female 1	33	33
Female 2	33	42
Male	48	75

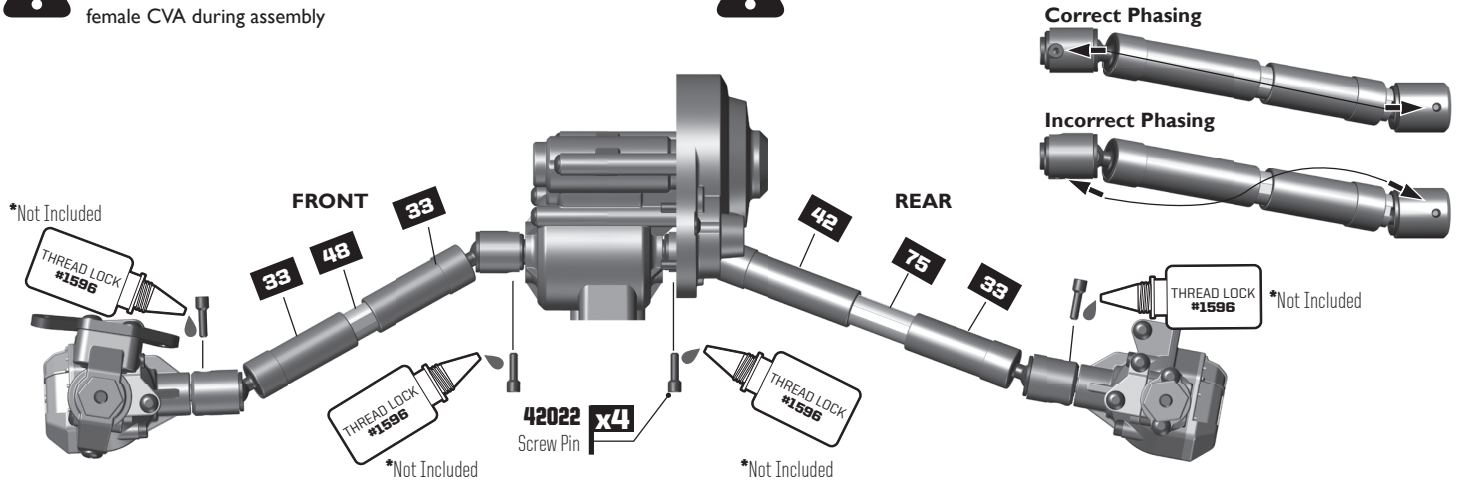


NOTE: Build a front and rear drive shaft

GATE 02 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.



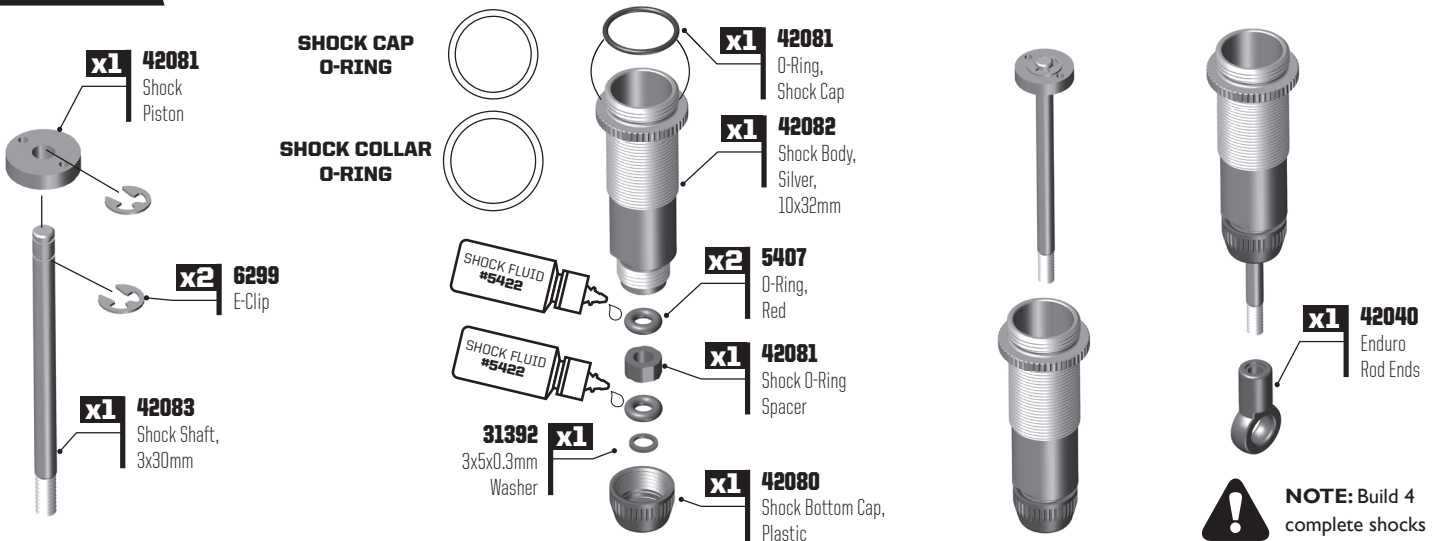
GATE 03 DRIVESHAFT BUILD: BAG 8

NOTE: Install the front drive shaft

NOTE: Install the rear drive shaft



GATE 01 SHOCK BUILD: BAG 9

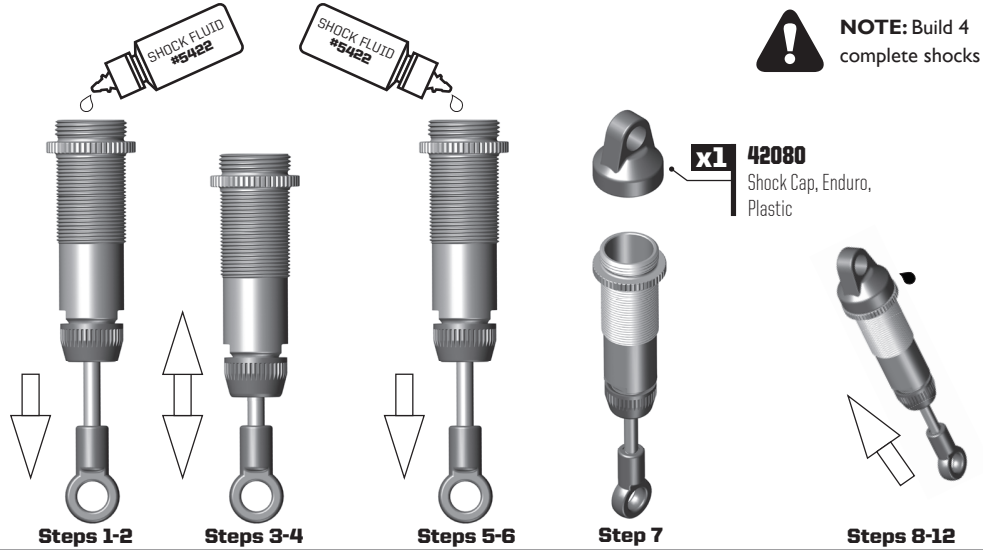


NOTE: Build 4 complete shocks

GATE 02 SHOCK BUILD: BAG 9

Shock Bleeding Steps:

1. Pull shock shaft down.
2. Fill shock body 3/4 full with shock 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.

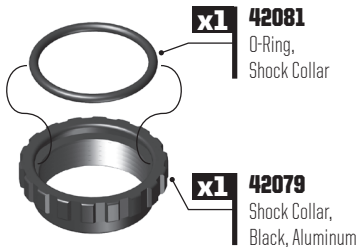
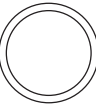


GATE 03 SHOCK BUILD: BAG 9

SHOCK CAP O-RING



SHOCK COLLAR O-RING



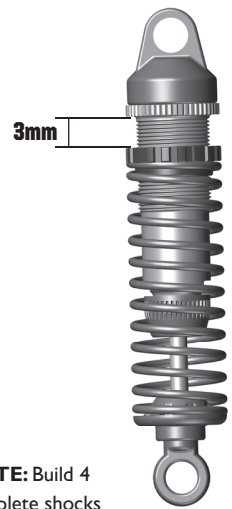
Pro Tip: Use your finger to rub shock fluid on the o-ring for smoother adjustment.



- x1 42089** Front Shock Spring, Gray, 1.49 lb/in, 63mm
- x1 42090** Rear Shock Spring, Blue, 2.09 lb/in, 63mm

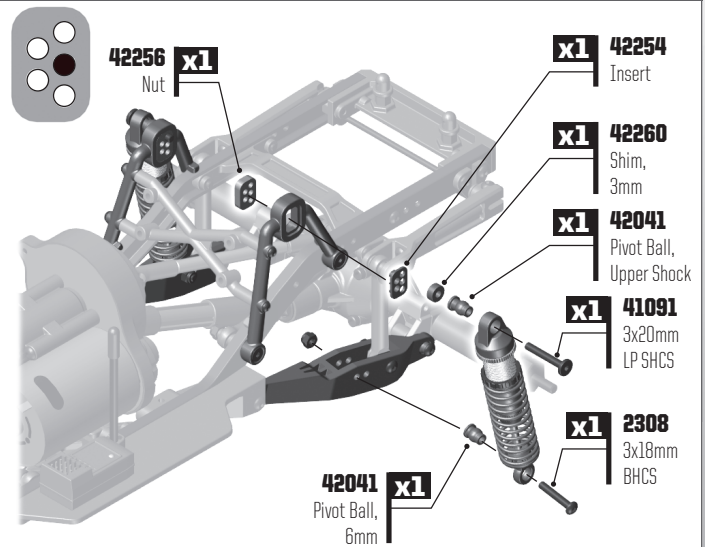
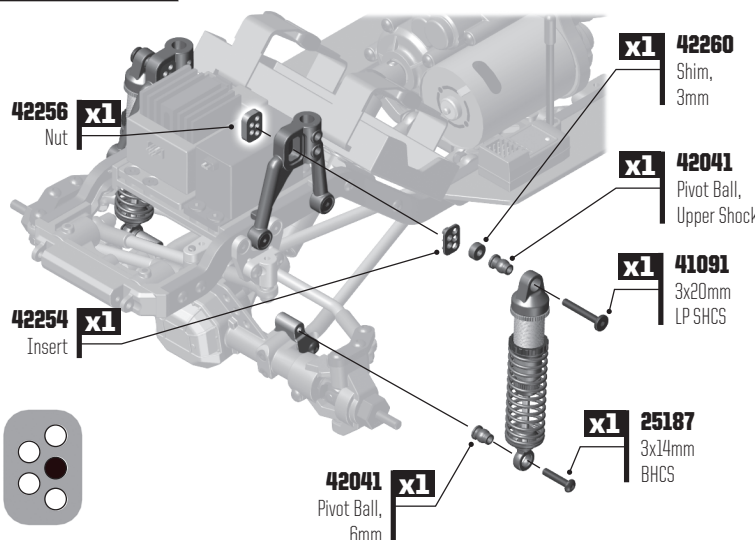


- x1 42080** Shock Spring Cup, Plastic

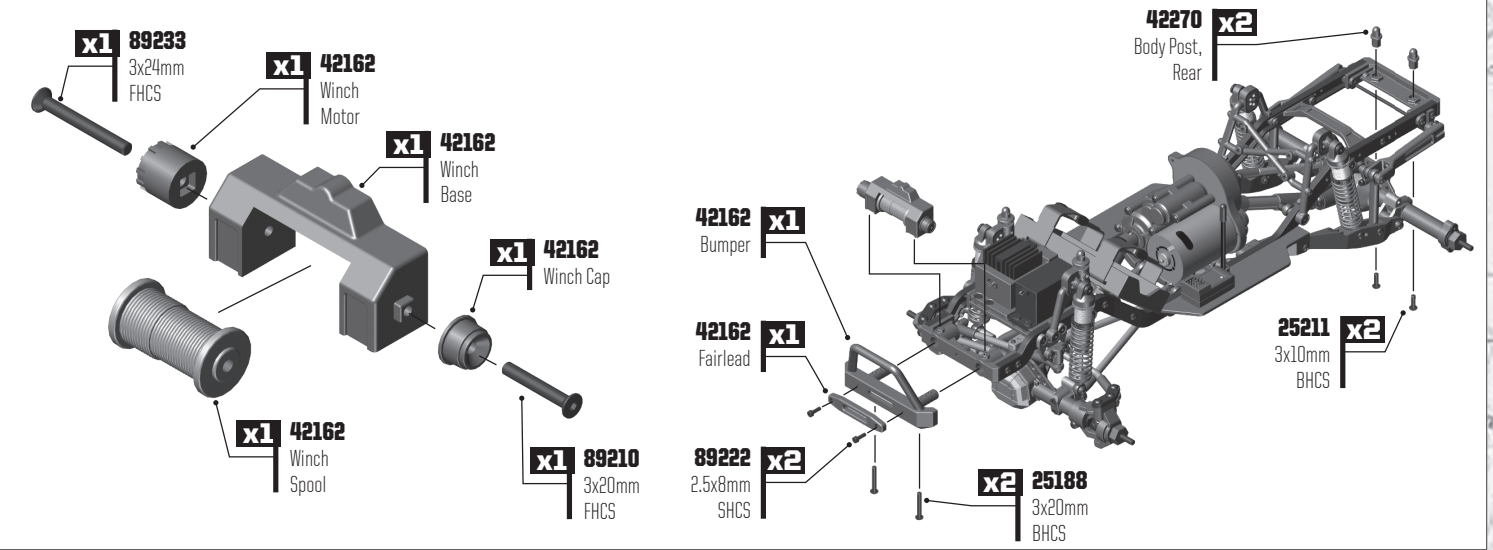


NOTE: Build 4 complete shocks

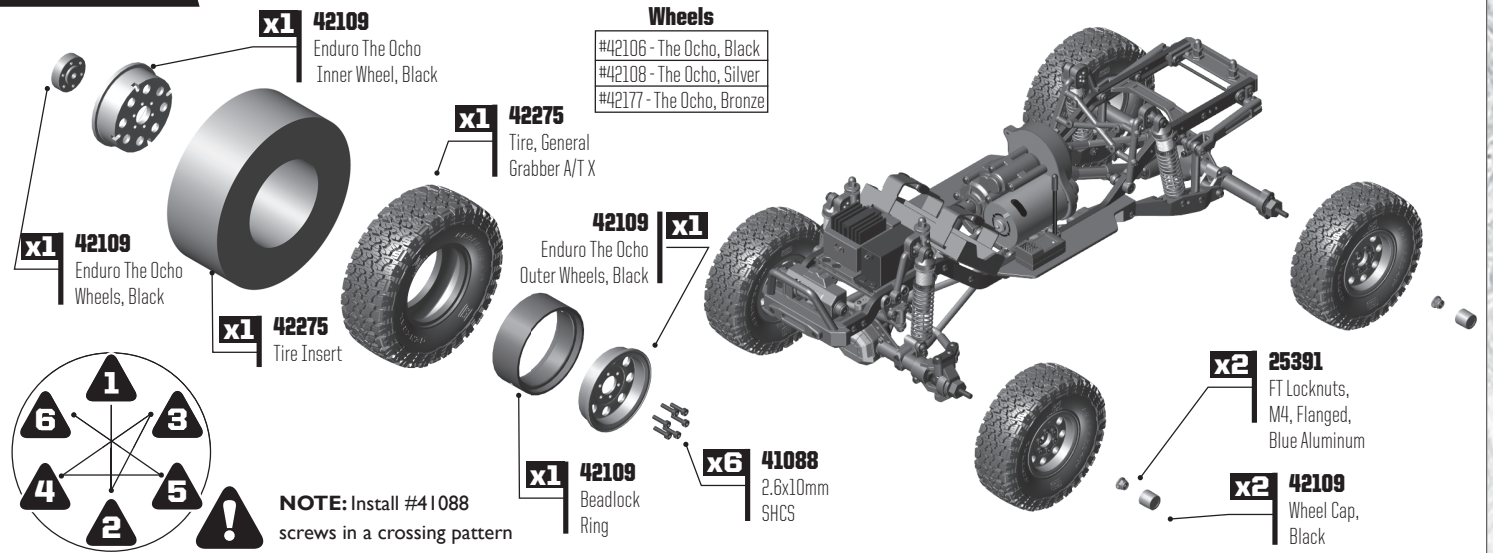
GATE 04 SHOCK BUILD: BAG 9



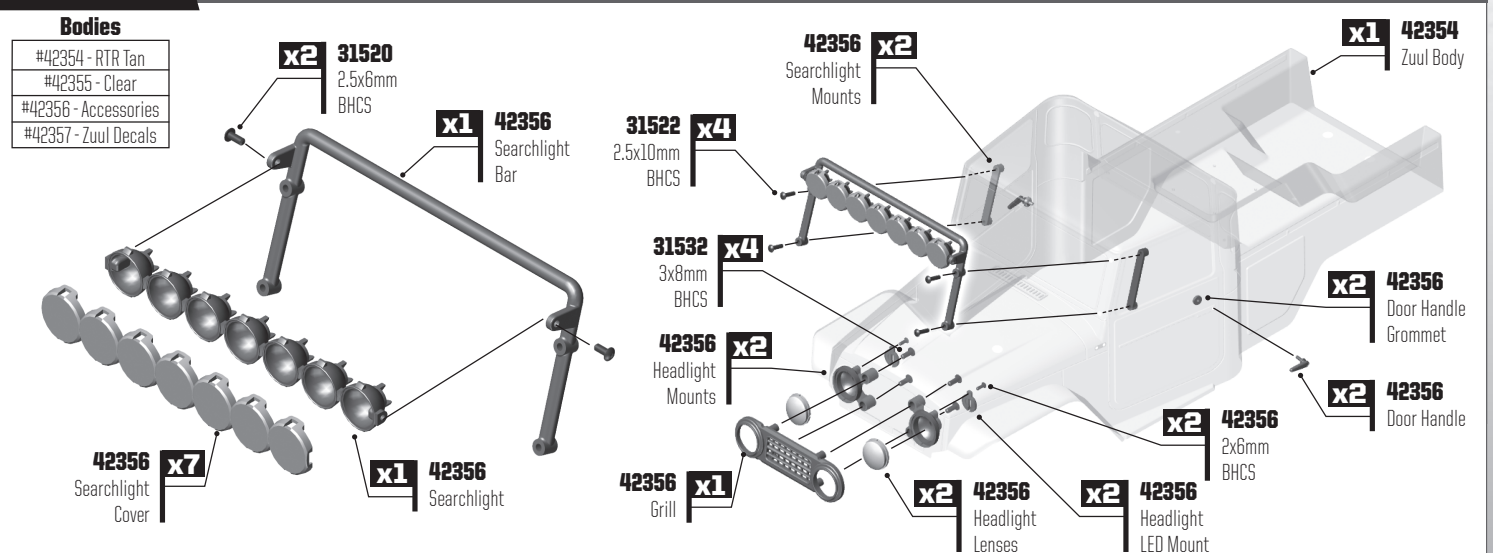
GATE 01 CAGE BUILD: BAG 10



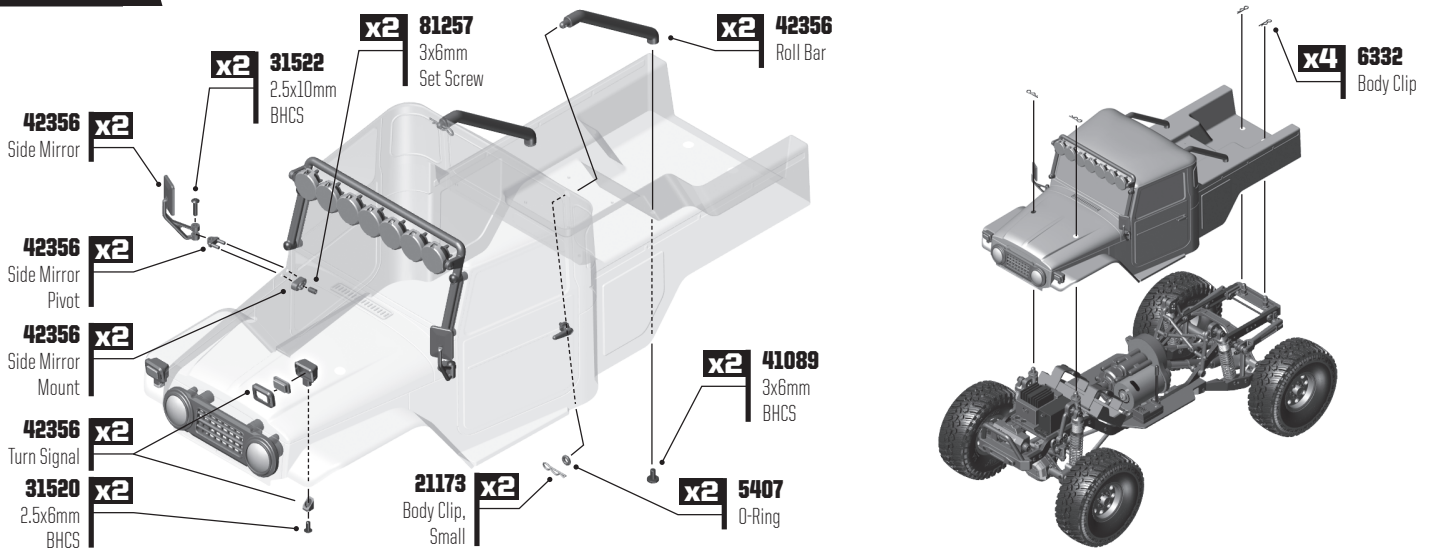
GATE 02 CAGE BUILD: BAG 10



GATE 03 CAGE BUILD: BAG 10



GATE 04 CAGE BUILD: BAG 10



TRAIL TIPS AND CHECKLIST

PREPARING TO HIT THE TRAIL:

When preparing to hit the trail, it's a good idea to have a checklist to make sure you have everything and don't end up having to head back early. We've compiled a checklist of the things we think you'll need on the trail. We've also left some space for you to add your specific items to the list. Keep in mind these are suggestions and every person will require different items. Weather and altitude will also dictate how much food and water a person will require. Do a little research first before heading out for a full day on the trail.

- | | |
|--|---|
| <input type="checkbox"/> Vehicle with charged battery | <input type="checkbox"/> 1-2 spare charged batteries for your rig |
| <input type="checkbox"/> Radio with charged batteries | <input type="checkbox"/> Spare radio batteries |
| <input type="checkbox"/> Check all nuts and screws and tighten them. Including wheel nuts! | <input type="checkbox"/> Backpack |
| <input type="checkbox"/> Spare parts (nuts, screws, body clips, and anything that may wear or break) | <input type="checkbox"/> Water (2 liters per person minimum) |
| <input type="checkbox"/> Sturdy shoes (Hiking boots or something with grip and ankle support) | <input type="checkbox"/> Element hat or beanie |
| <input type="checkbox"/> Element hoodie or jacket | <input type="checkbox"/> Snacks (protein bars, trailmix, etc.) |
| <input type="checkbox"/> Sunscreen | <input type="checkbox"/> Bug spray |
| <input type="checkbox"/> Nut drivers (Factory Team Nut Drivers #1507, 1508) | <input type="checkbox"/> Lip balm |
| <input type="checkbox"/> Allen wrenches (Factory Team Hex Driver set #1655) | <input type="checkbox"/> Cell phone and charger |
| <input type="checkbox"/> Headlight or flashlight with spare batteries | <input type="checkbox"/> Compact action camera |
| <input type="checkbox"/> Camera | <input type="checkbox"/> Tripod |

TREAD LIGHTLY:

Remember, when driving your rig out on the trails, it's important to tread lightly. We all know that the best place to enjoy our hobby is out in nature, and that means we need to preserve it for future hobbyist so we all have a place to enjoy. Here are a few tips to remember when out on the trail.

• Pack In/Pack Out:

Don't leave anything behind. Whether it's trash, parts, or food. If you brought it, take it with you.

• National and Public Parks:

If visiting a national park, leave the RC cars at home. It is illegal to drive any radio-control vehicle within national park boundaries. Public parks are slightly different, some may allow radio-control vehicles and others may not. Check with your local officials before driving in a public park.

• Be Considerate:

Wherever you drive your radio-control car, always be considerate of others. Hikers, bicyclists, and animals should always be given the right of way.

• Keep It Quiet:

If you're sharing an area with other people, try to keep the noise to a minimum. If you come across animals or anglers, please be considerate and give them space.

• Give A Hoot, Don't Pollute:

When enjoying the outdoors take your trash with you. Not only is it bad for the environment, it's unsightly. If you see trash, pick it up, even if it isn't yours. If we all do our part we can work together to keep our planet beautiful for future generations.

• Only You Can Prevent Wild Fires:

Some of us like to mix camping with RC cars. This is great! Just remember to follow all safety precautions and put out any camp fires before calling it a night. Also, be sure to unplug and **store all LiPo batteries in LiPo sacks and a fire resistant storage device.**

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 descents, 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:

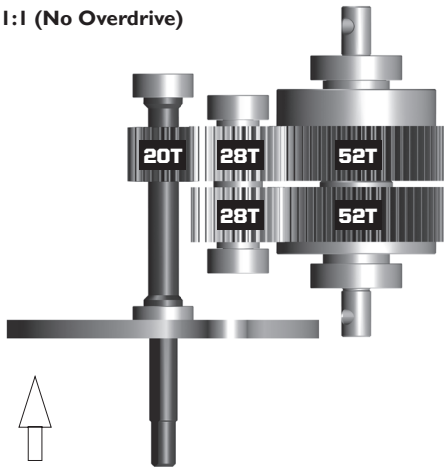
The Stealth X gearbox allows the driver to change the front-to-rear drive ratios with 3 separate ratio adjustments to the rear drive shaft. The driver has the option to flip the gearbox direction (motor mount facing the front). The optional inverse top shaft (#42024) is required.

Please Note:

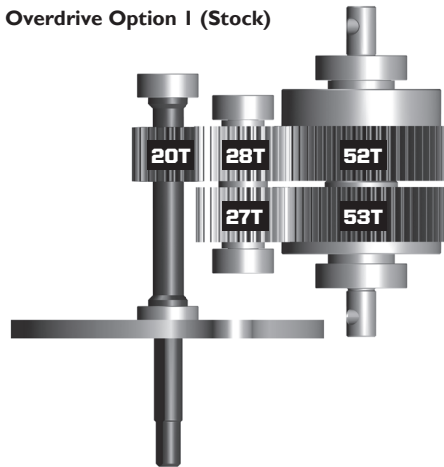
The 20T top shaft, 28T idler gear, and 52T drive gear will always be meshed together in all 6 gearbox configurations.

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

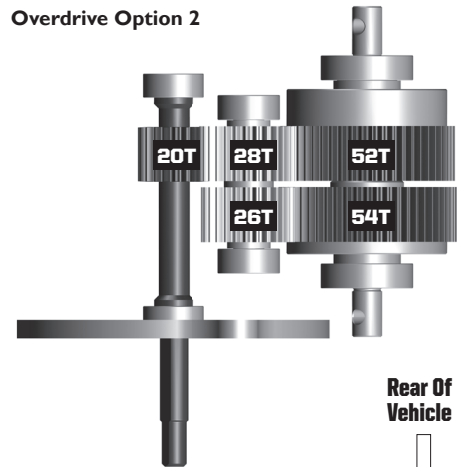
I:1 (No Overdrive)



Overdrive Option 1 (Stock)

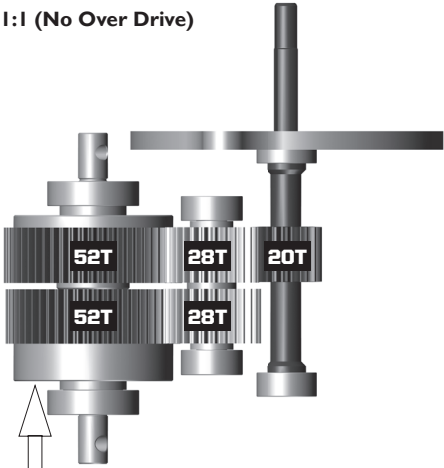


Overdrive Option 2

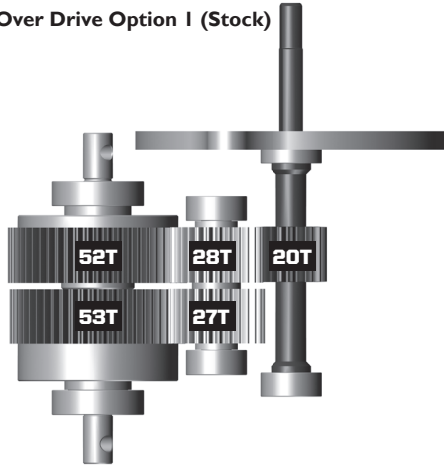


GATE 03 STEALTH X: BUILD CONFIGURATION: MOTOR MOUNT FACING FRONT (OPTIONAL - REQUIRES #42024 - TOP SHAFT)

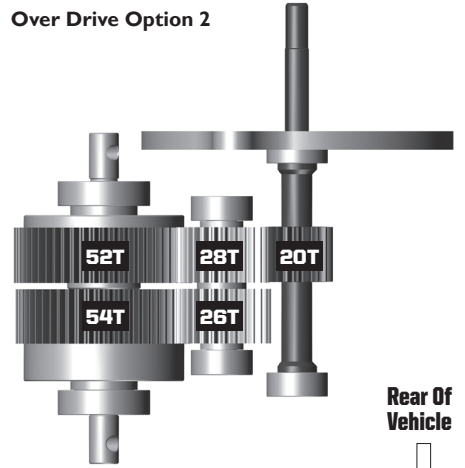
I:1 (No Over Drive)

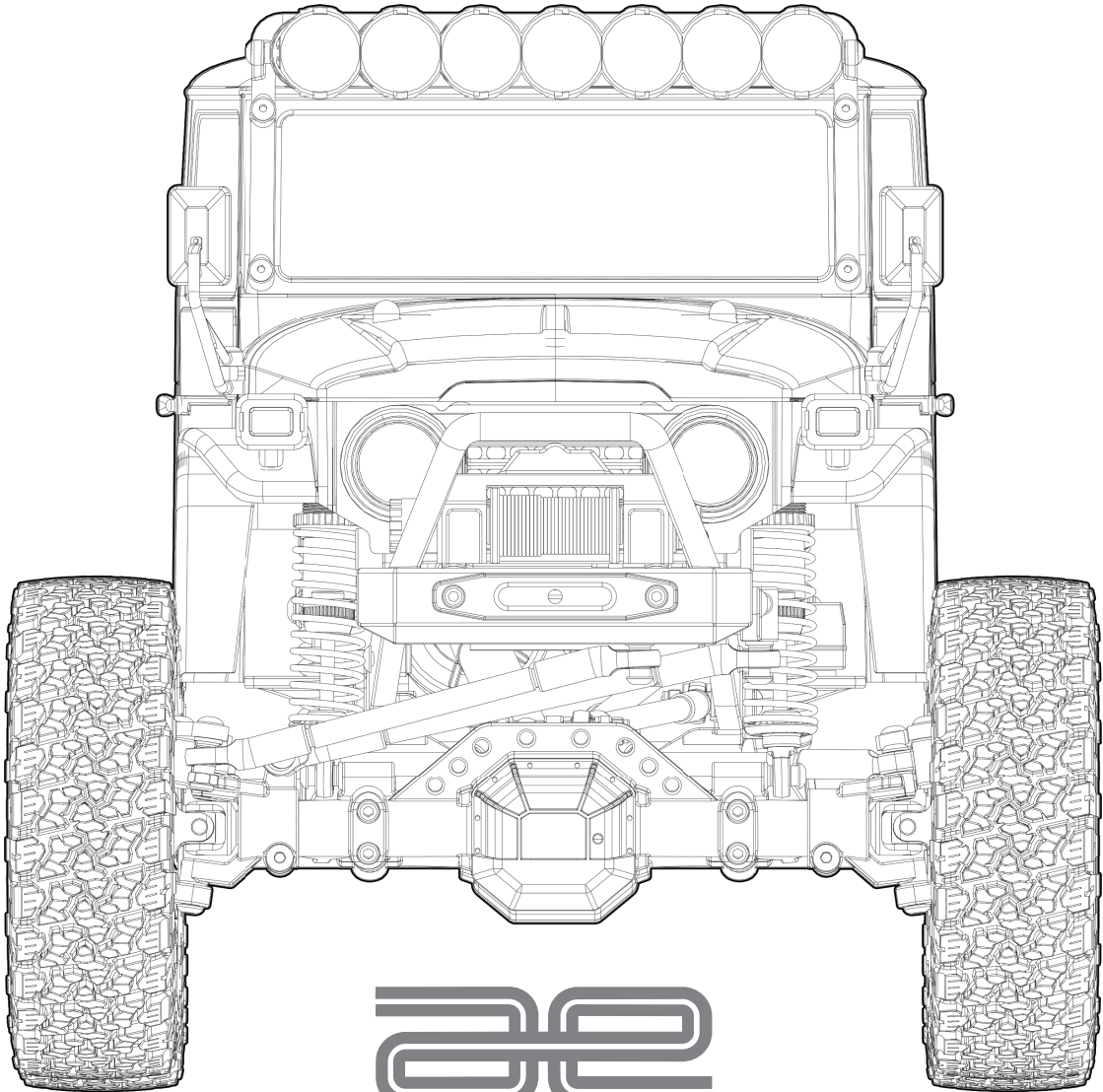


Over Drive Option 1 (Stock)



Over Drive Option 2





ASSOCIATED ELECTRICS, INC.
21062 BAKE PARKWAY LAKE FOREST, CA 92630 USA

CALL: (949) 544-7500 - FAX: (949) 544-7501
CHECK OUT THE FOLLOWING WEB SITES FOR ALL OF OUR KITS,
CURRENT PRODUCTS, NEW RELEASES, SETUP HELP, TIPS, AND RACING INFO!
WWW.ASSOCIATEDELECTRICS.COM



ElementRC



@Element_RC