

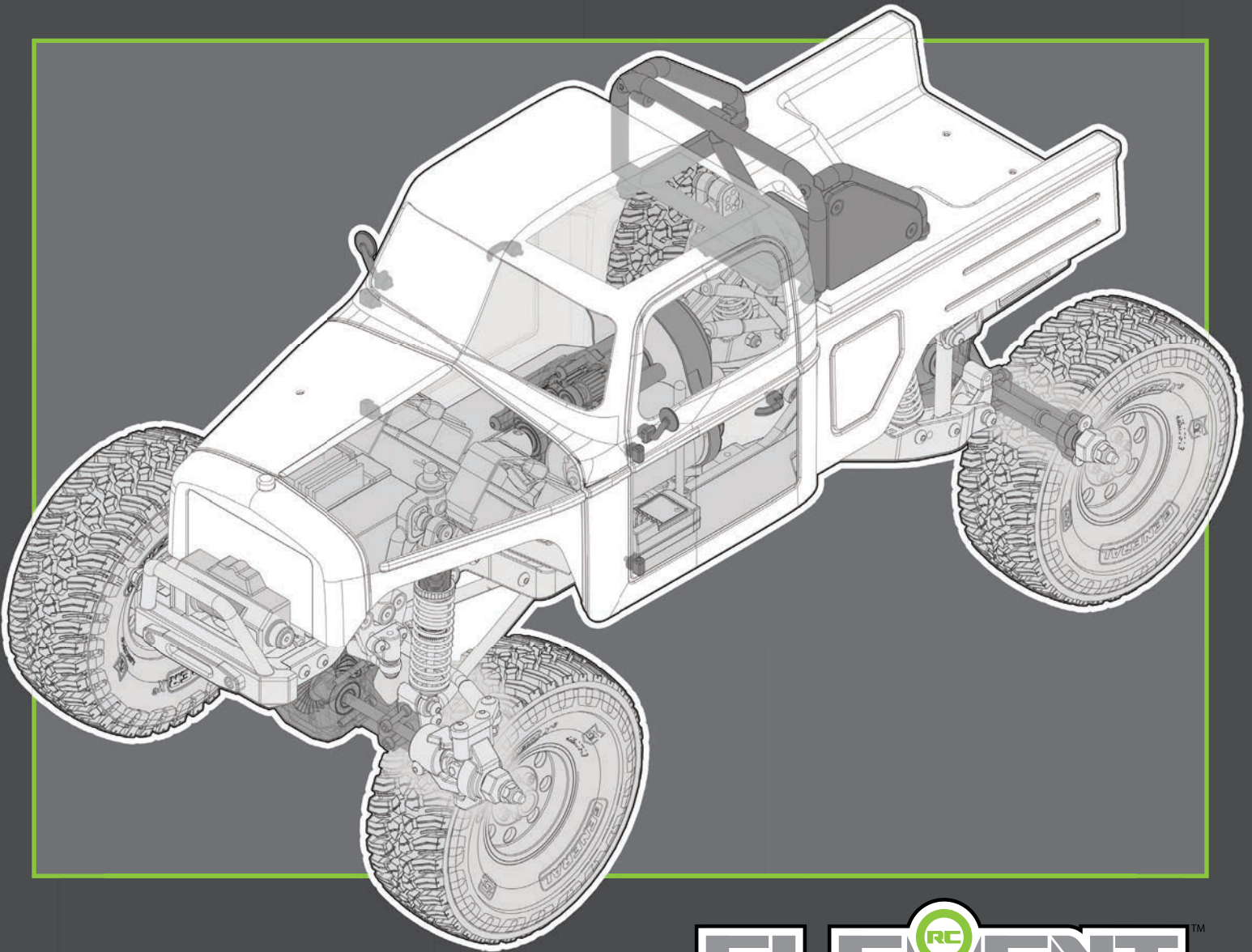
# ENDURO

WITH TRAILING ARM SUSPENSION

ECTO TRAIL TRUCK



## OWNERS BUILD MANUAL





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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.

## ECTO 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 Ecto Trail Truck RTR!

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

What makes the Enduro Ecto 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 Ecto 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 Ecto 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 Ecto 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)






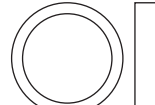
**LOCK NUTS**

	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

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1/12/2023

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## 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.



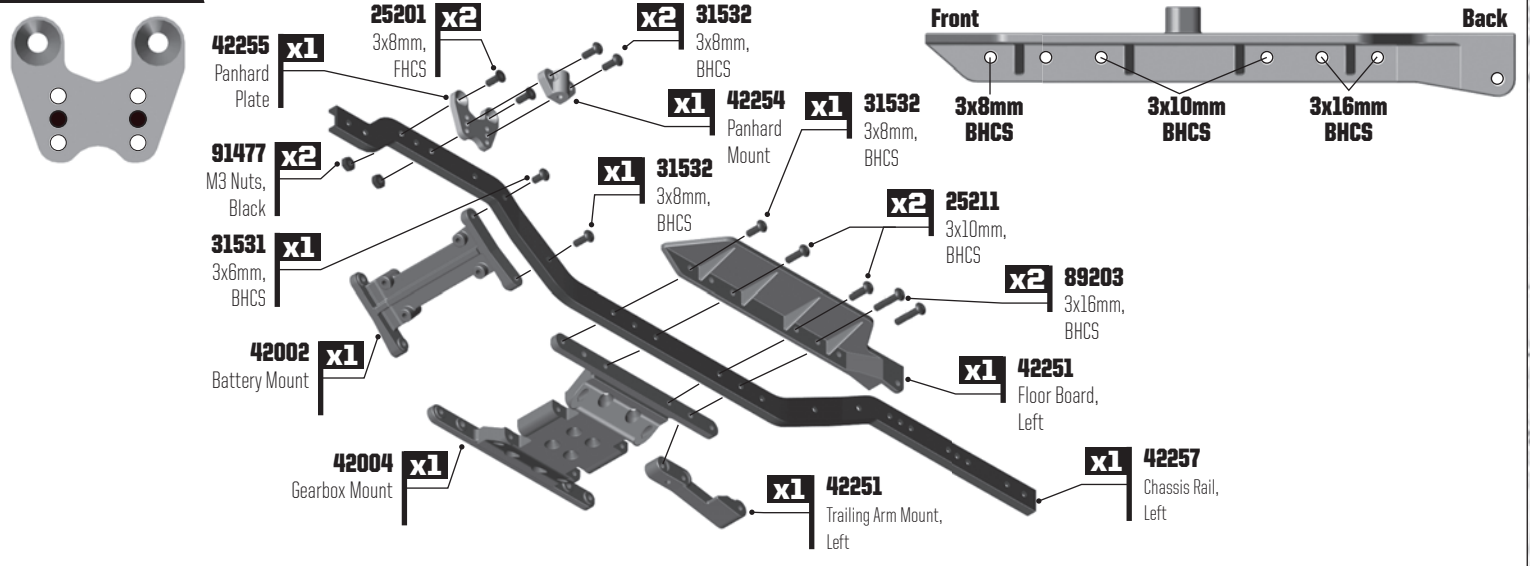
This symbol indicates where Shock Fluid should be applied.



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.

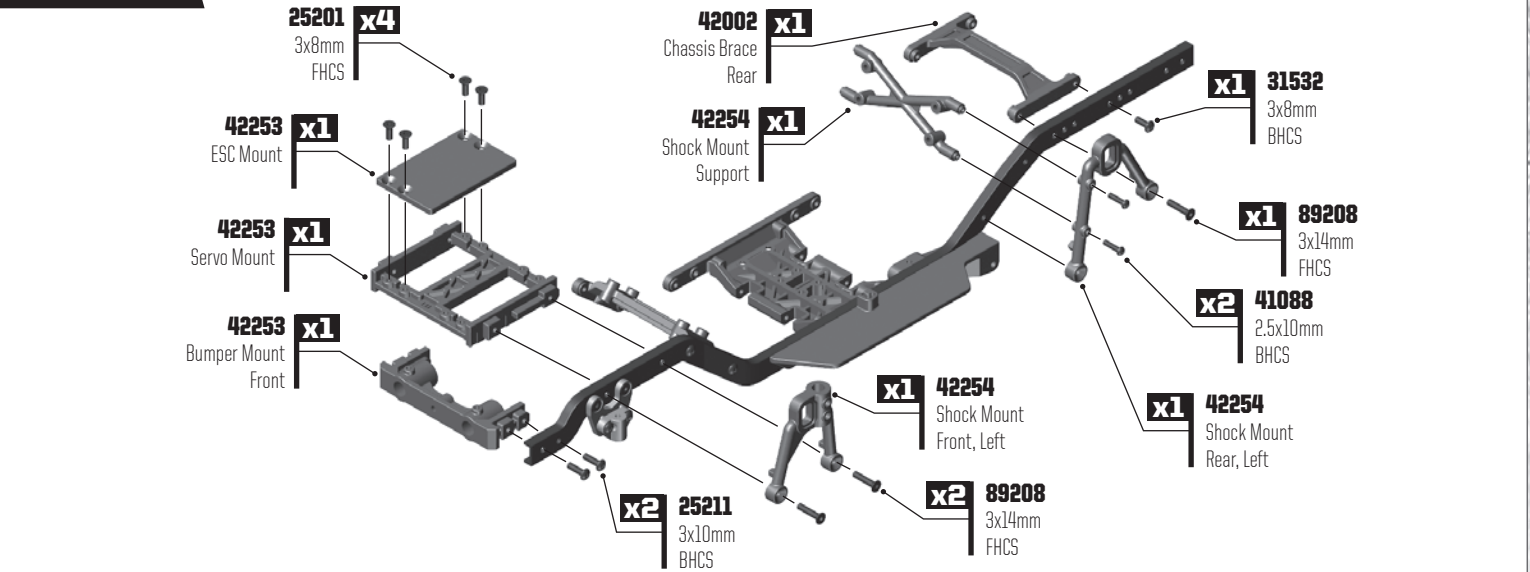
**GATE 01**

CHASSIS BUILD: BAGS 1, 2



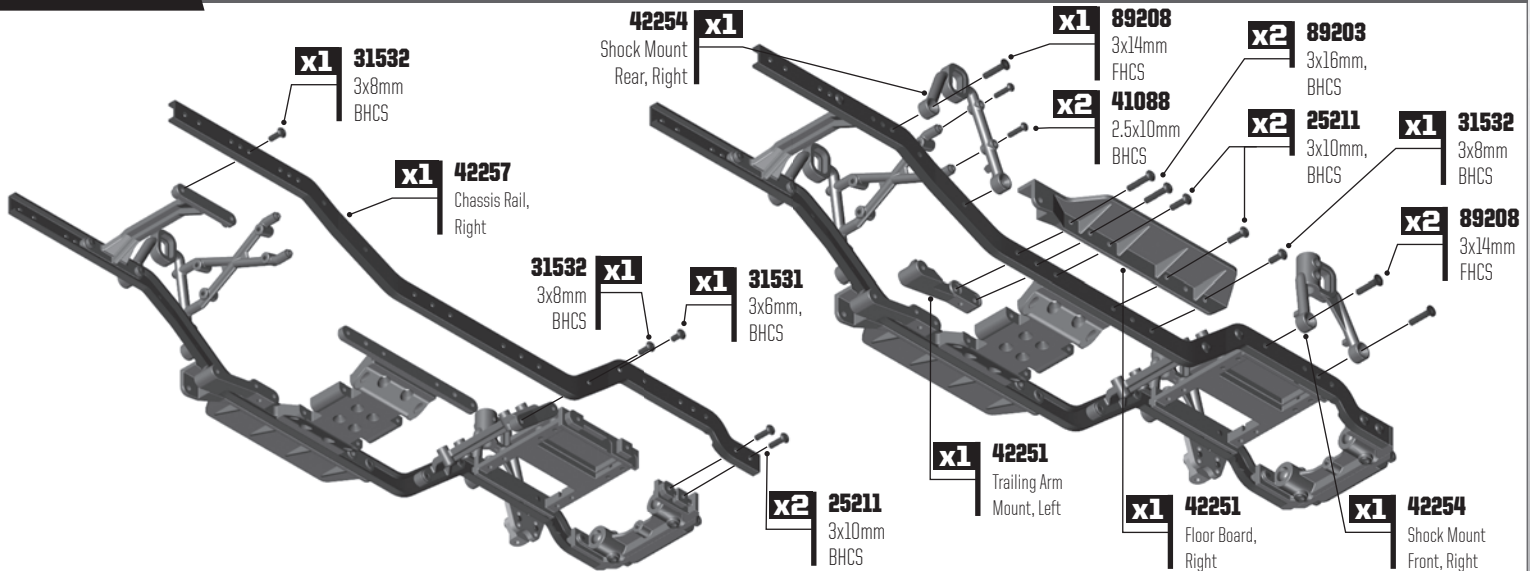
**GATE 02**

CHASSIS BUILD: BAGS 1, 2

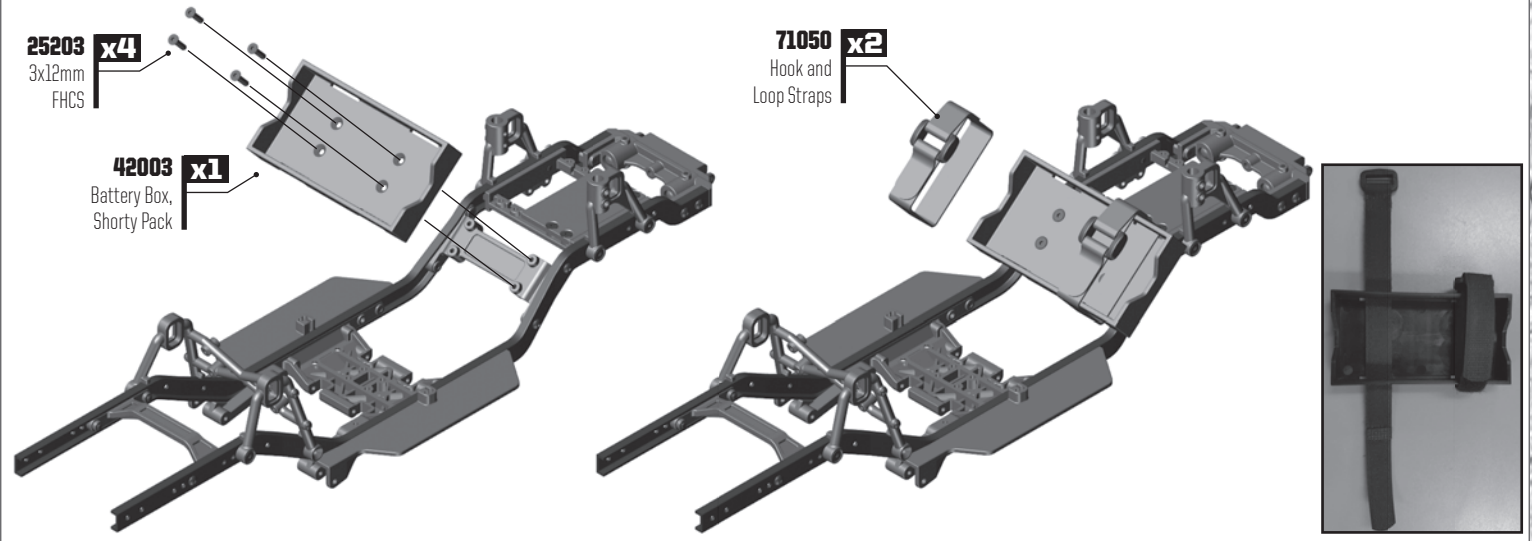


**GATE 03**

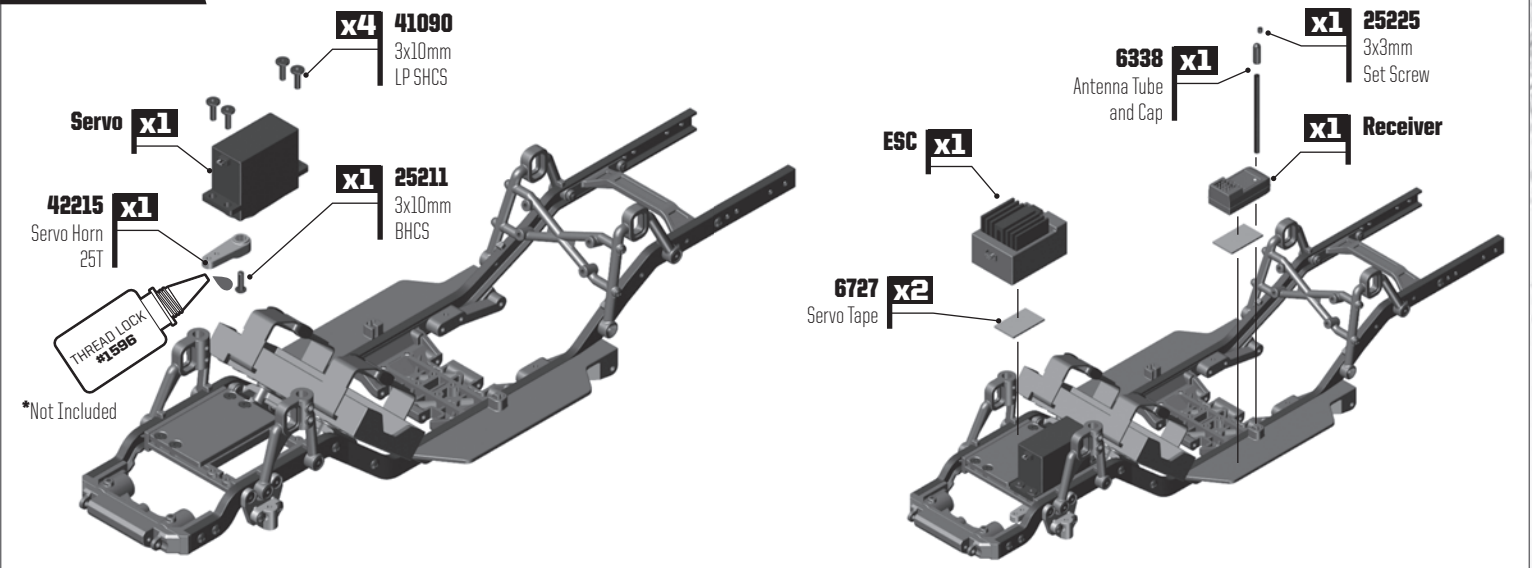
CHASSIS BUILD: BAGS 1, 2



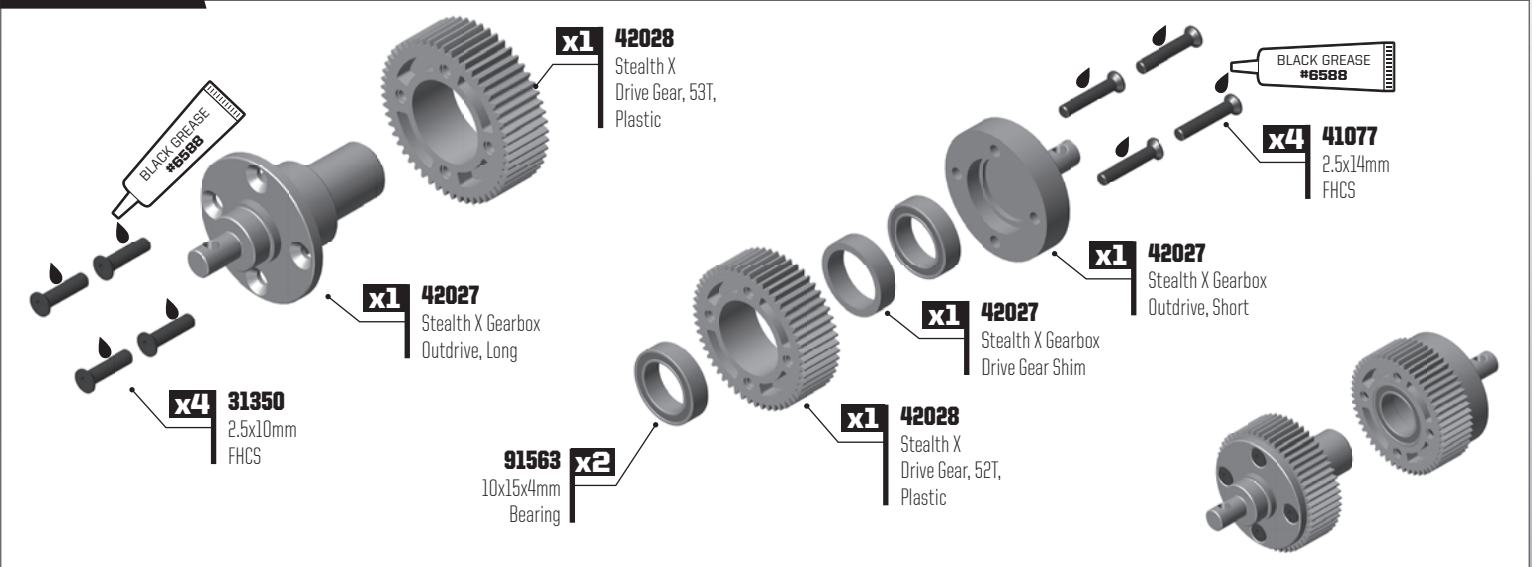
## GATE 01 ELECTRONIC MOUNTS BUILD: BAG 3



## GATE 02 ELECTRONIC MOUNTS BUILD: BAG 3



## GATE 01 GEARBOX BUILD: BAG 4



## GATE 02 GEARBOX BUILD: BAG 4

**NOTE:** There are optional gearbox builds on page 28

**Over Drive Option I (Stock)**

## GATE 03 GEARBOX BUILD: BAG 4

## GATE 04 GEARBOX BUILD: BAG 4

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

### GATE 01 FRONT AXLE BUILD: BAG 5

**41086** x4  
2.5x16mm SHCS

**91560** x2  
5x10x4mm Bearing

**91474** x2  
7x14x3.5mm Bearing

**BLACK GREASE #6588**

**42066** x1  
Pinion Gear, 8T

**42061** x1  
Axle Housing, Front

**42060** x1  
Axle Housing Differential Cover

**42065** x1  
Ring Gear, 30T

**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

**42062** x1  
Steering Block

**25187** x1  
3x14mm BHCS

**42067** x1  
Universal, 80mm

**91563** x1  
10x15x4mm Bearing

**91560** x1  
5x10x4mm Bearing

**71032** x2  
2.5x14mm SHCS

**42060** x1  
Lower 4-Link Mount

**42070** x2  
3x4x10mm Shoulder Screw

**NOTE:** Do not overtighten screws!

**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

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



**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

THREAD LOCK #1596

**x1** 25188 3x20mm BHCS

**x2** 25215 M3 Locknut, Black

102.20mm

## GATE 03 LINKS BUILD: BAG 7

**x2** 42040 Rod End, Curved

BLACK GREASE #6588

**x1** 42043 Link, 93mm

**x2** 42041 Pivot Ball, 6mm

**NOTE:** Check the rod end angles before installation

122.00mm

25188 **x1** 3x20mm, BHCS

41078 **x1** 3x28mm, BHCS

25215 **x2** M3 Locknut, Black

**x1** 42054 FT Pivot Ball, Steel, 6mm

## GATE 04 LINKS BUILD: BAG 7

**x2** 42041 Pivot Ball, 6mm

BLACK GREASE #6588

**x1** 42043 Steering Link

**x2** 42040 Rod End, Straight

154.50mm

25187 **x2** 3x14mm, BHCS

25215 **x2** M3 Locknut, Black

## GATE 05 LINKS BUILD: BAG 7

**x2** 42041 Pivot Ball, 6mm

BLACK GREASE #6588

**x1** 42043 Link, 100mm

**x2** 42040 Rod End, Curved

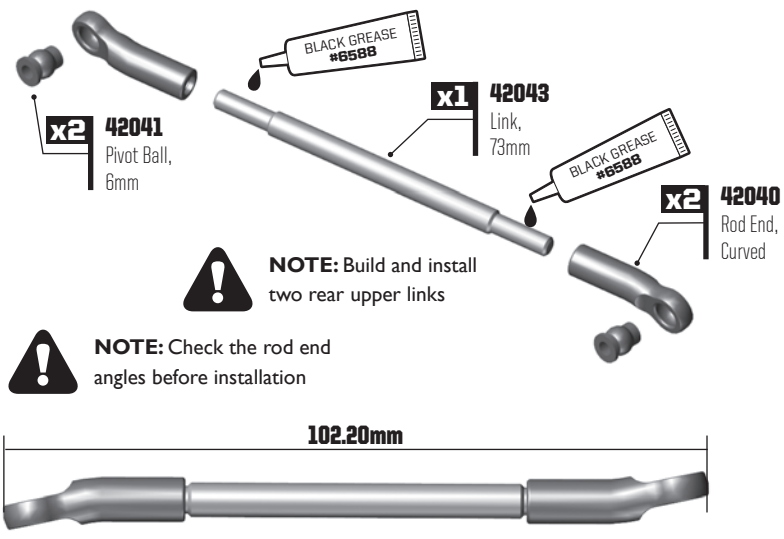
**NOTE:** Build and install two front lower links

129.50mm

4689 **x1** 3x16mm, Set Screw

25187 **x1** 3x14mm, BHCS

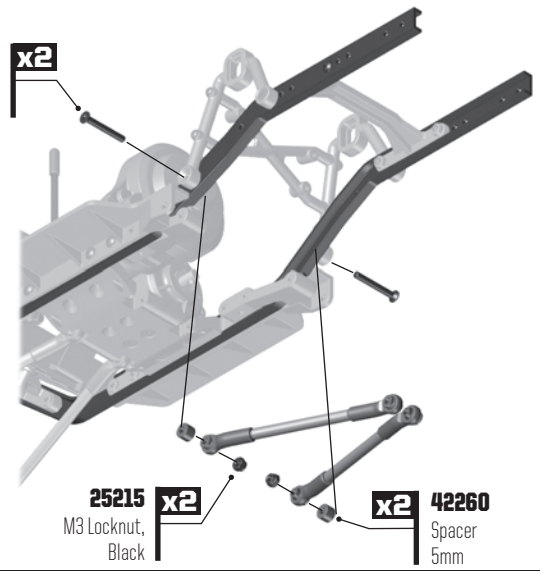
## GATE 06 LINKS BUILD: BAG 7



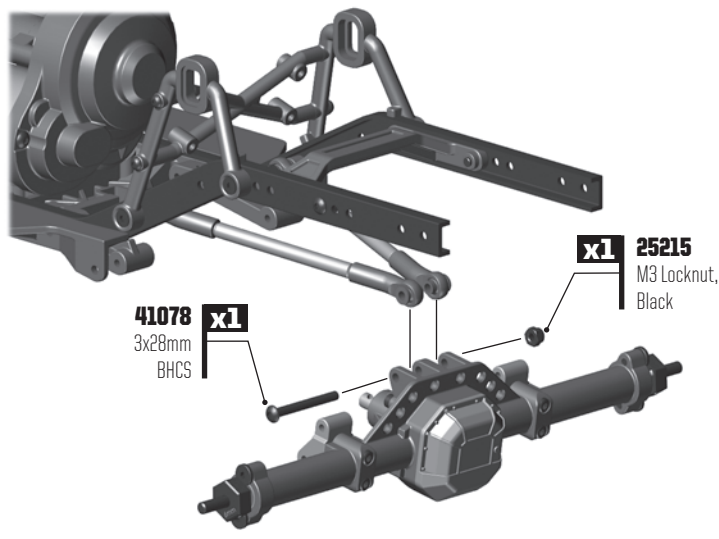
**NOTE:** Build and install two rear upper links

**NOTE:** Check the rod end angles before installation

**x2** 89233 3x24mm FHCS

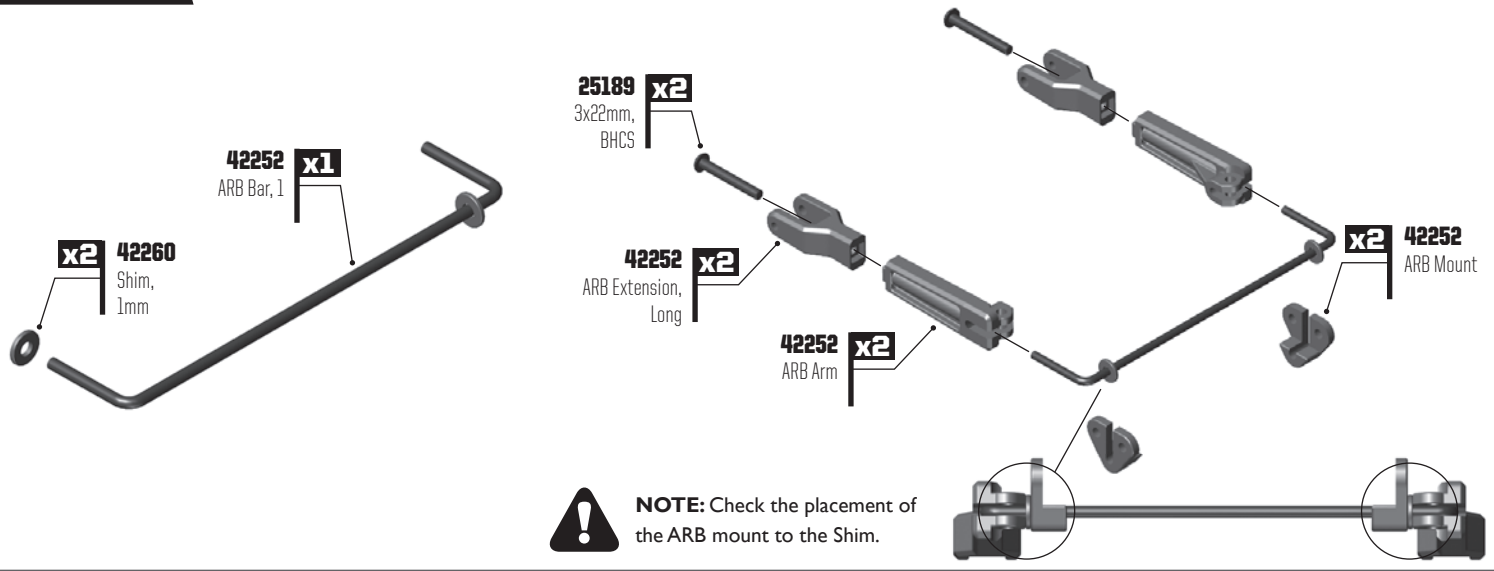


## GATE 07 LINKS BUILD: BAG 7



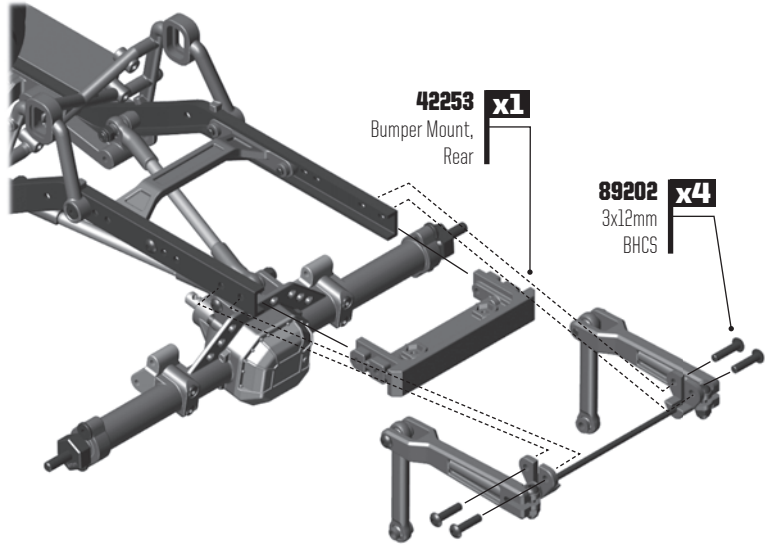
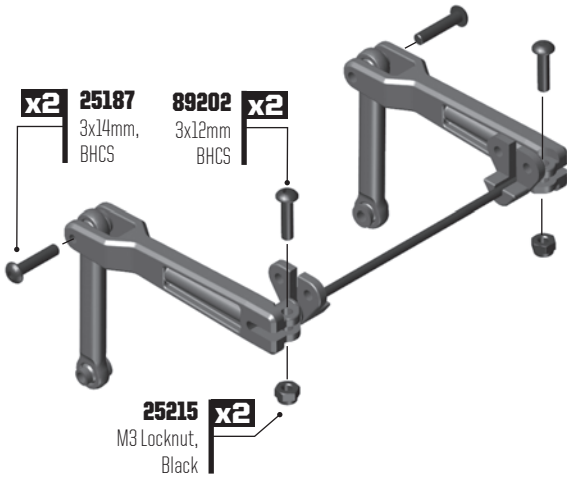
**NOTE:** Build and install two drop links

## GATE 08 LINKS BUILD: BAG 7

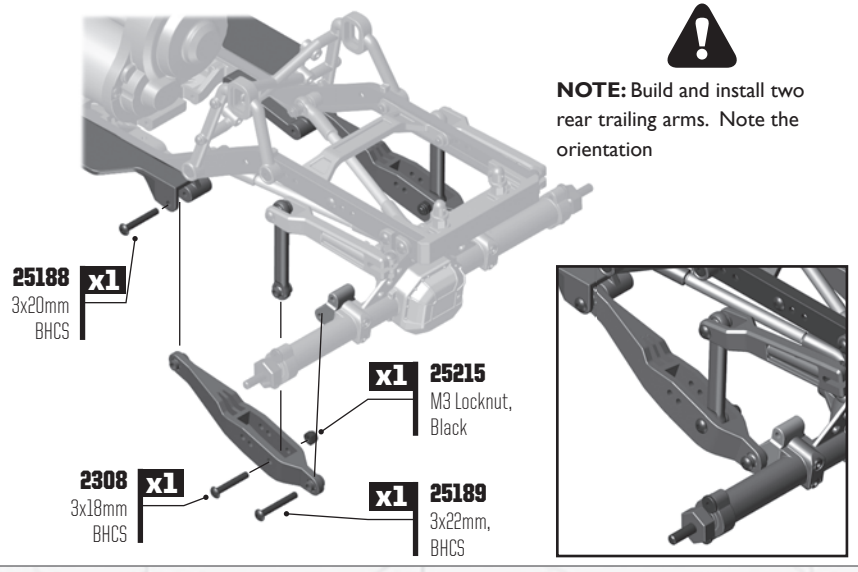
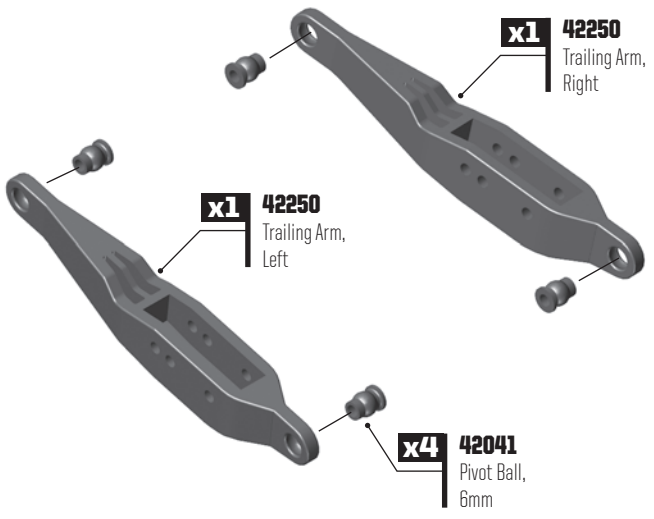


**NOTE:** Check the placement of the ARB mount to the Shim.

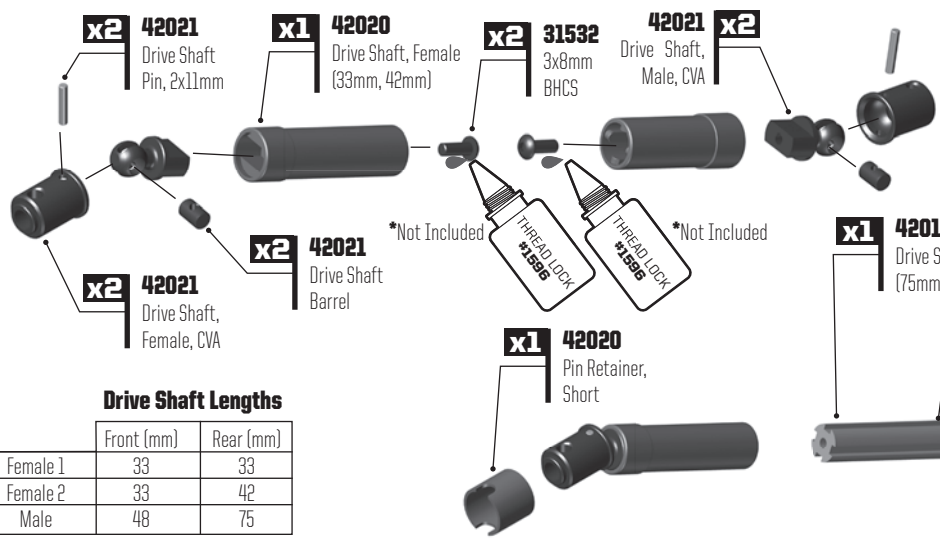
**GATE 09 LINKS BUILD: BAG 7**



**GATE 10 LINKS BUILD: BAG 7**

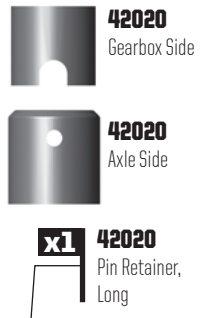


**GATE 01 DRIVE SHAFT BUILD: BAG 8**



**Drive Shaft Lengths**

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

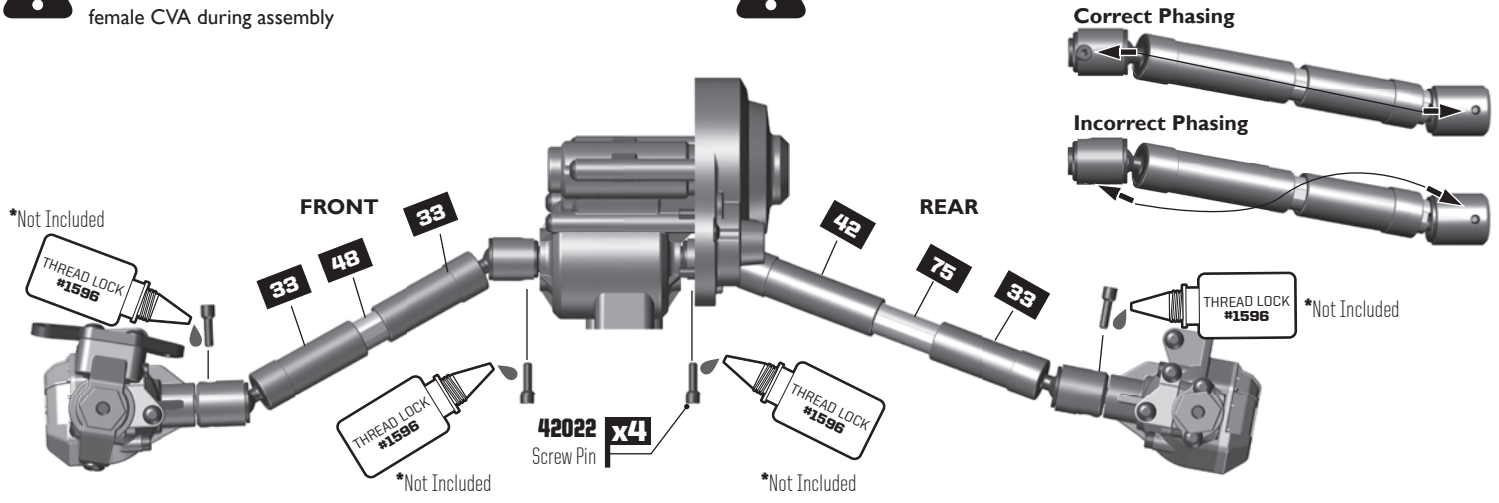


**NOTE:** Build a front and rear drive shaft

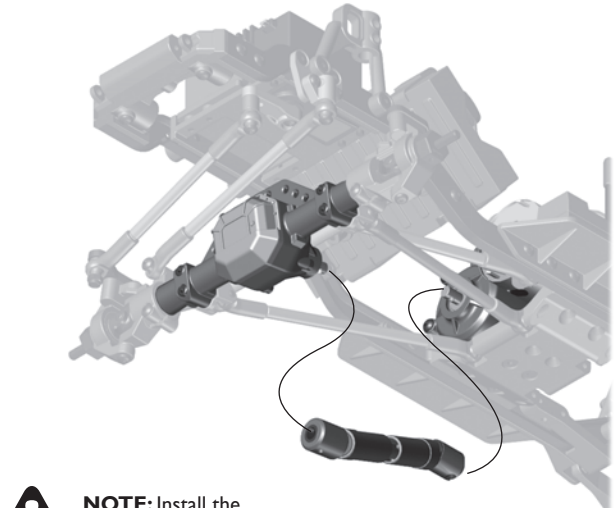
**GATE 02 DRIVESHAFT BUILD: BAG 8**

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

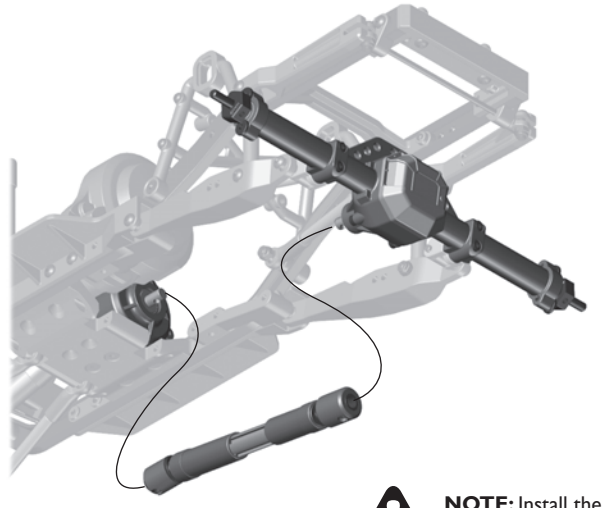
**NOTE:** Make sure the phasing of the drive shafts is correct when installing them to the axles and gearbox.



**GATE 03 DRIVESHAFT BUILD: BAG 8**

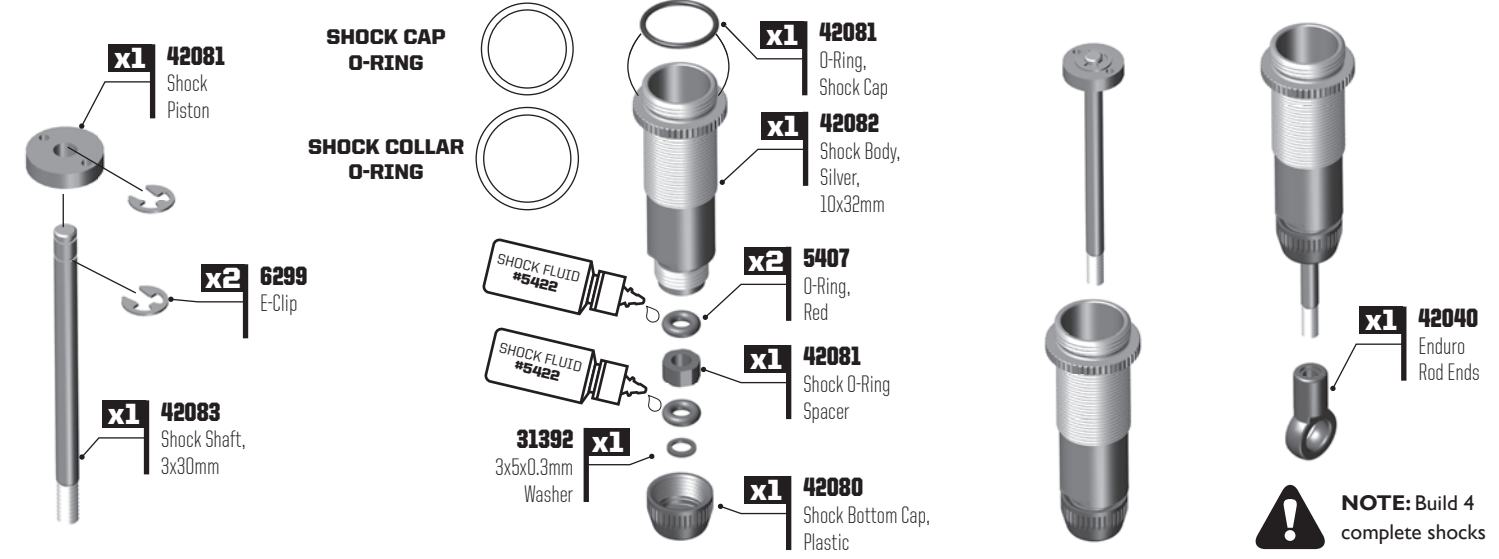


**NOTE:** Install the front drive shaft



**NOTE:** Install the rear drive shaft

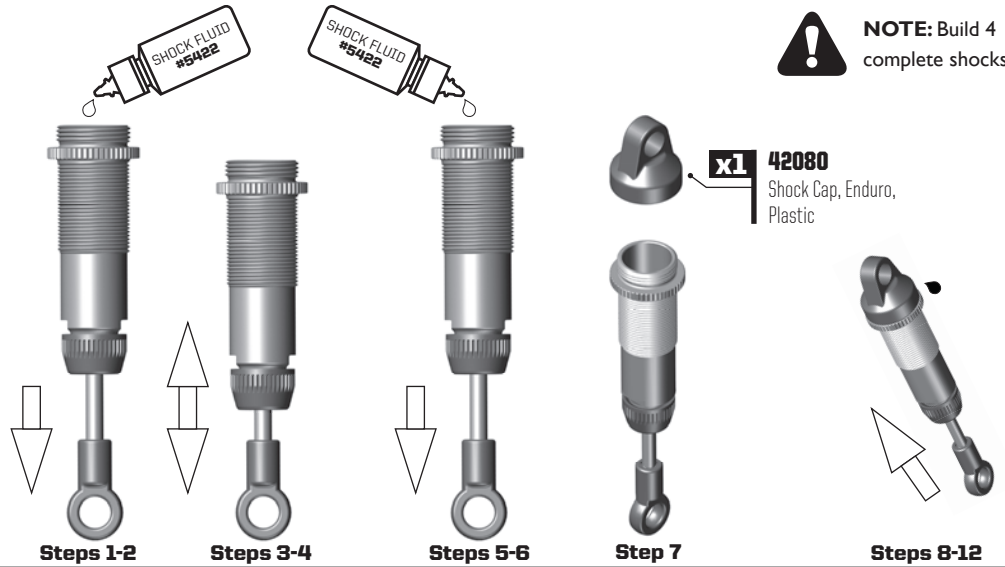
**GATE 01 SHOCK BUILD: BAG 9**



## GATE 02 SHOCK BUILD: BAG 9

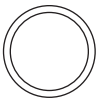
### Shock Bleeding Steps:

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.

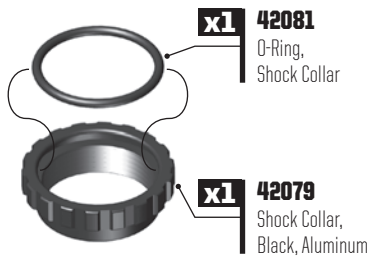
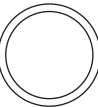


## GATE 03 SHOCK BUILD: BAG 9

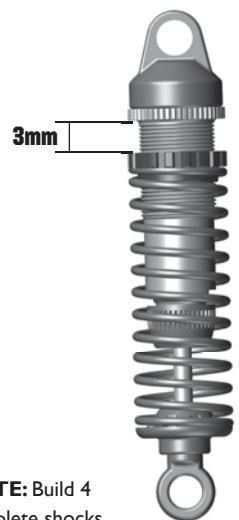
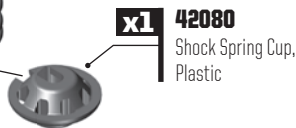
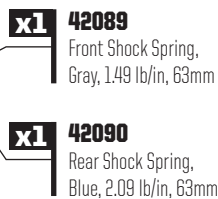
**SHOCK CAP O-RING**



**SHOCK COLLAR O-RING**

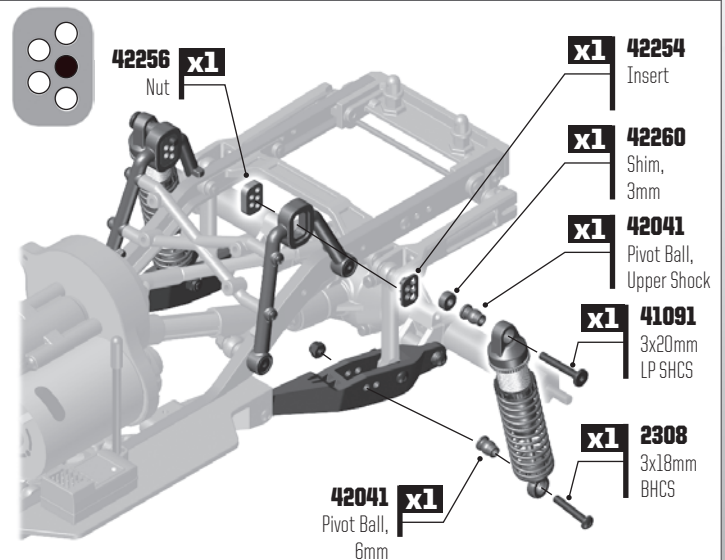
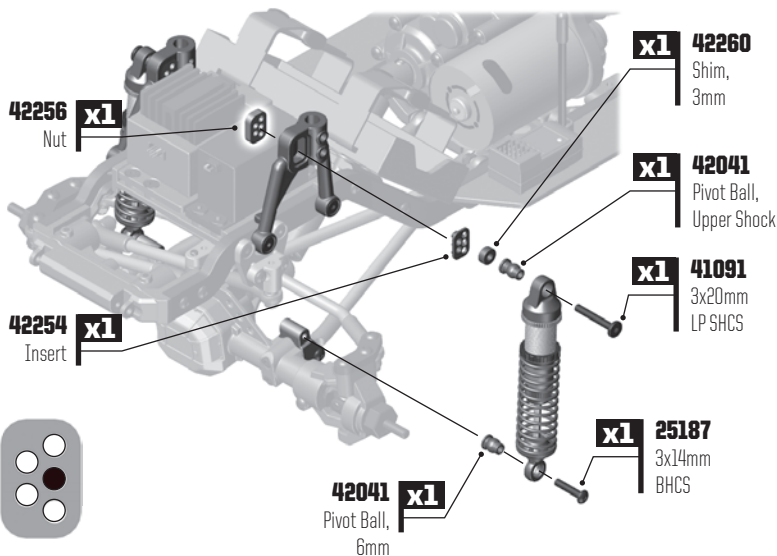


**Pro Tip:** Use your finger to rub shock fluid on the o-ring for smoother adjustment.

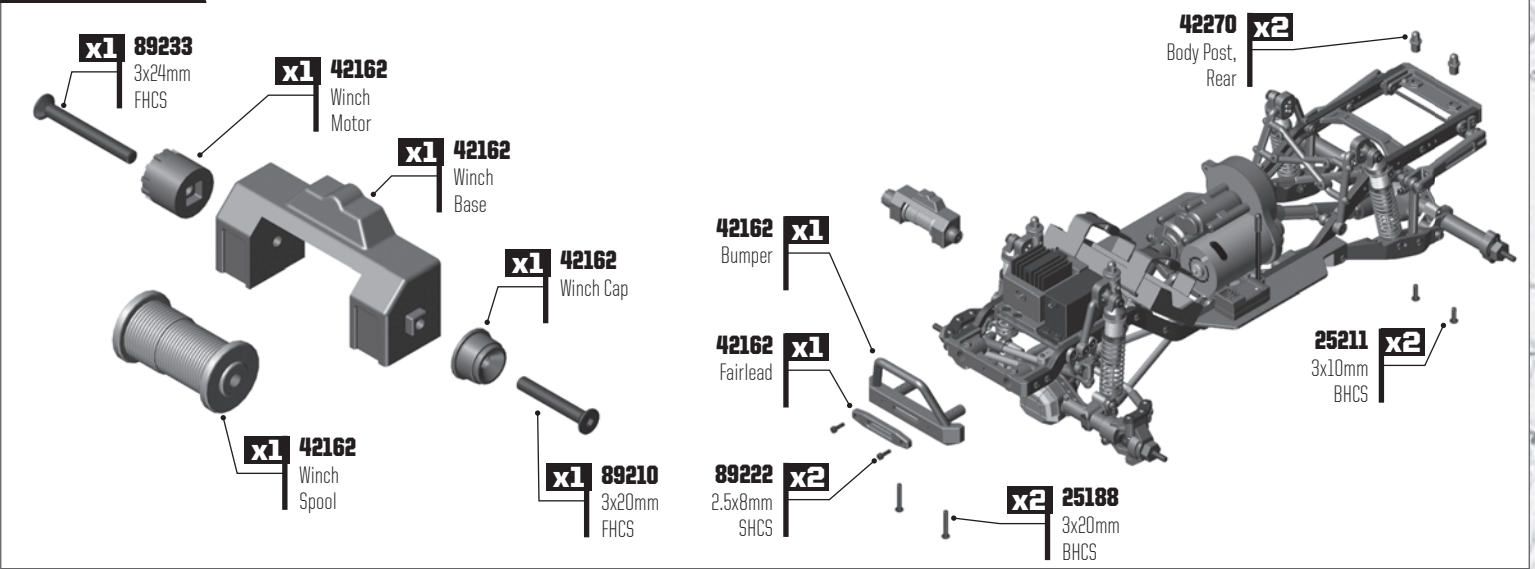


**NOTE:** Build 4 complete shocks

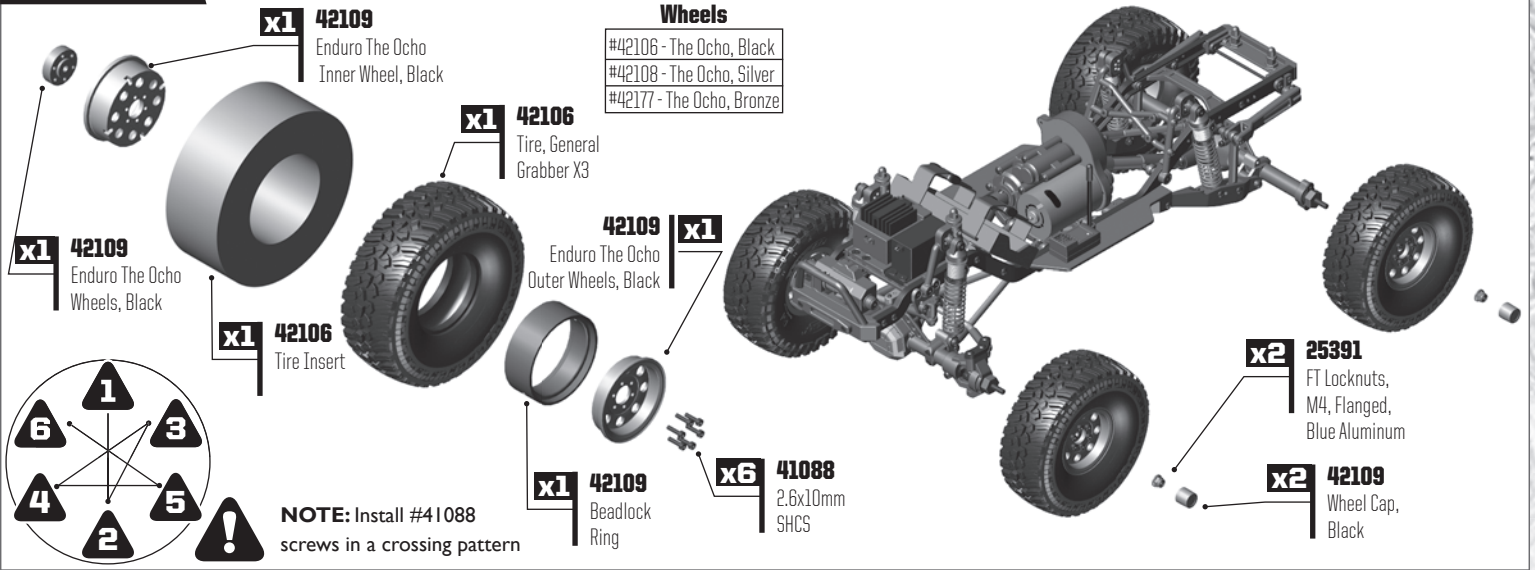
## GATE 04 SHOCK BUILD: BAG 9



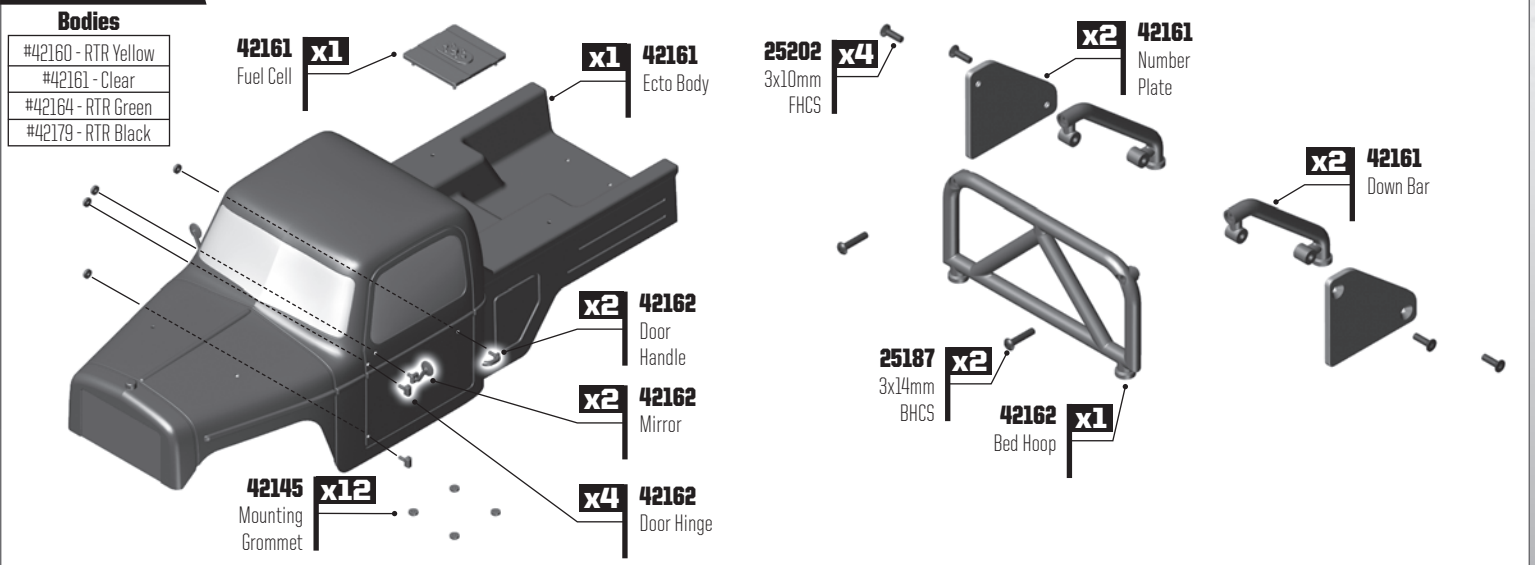
## GATE 01 CAGE BUILD: BAG 10

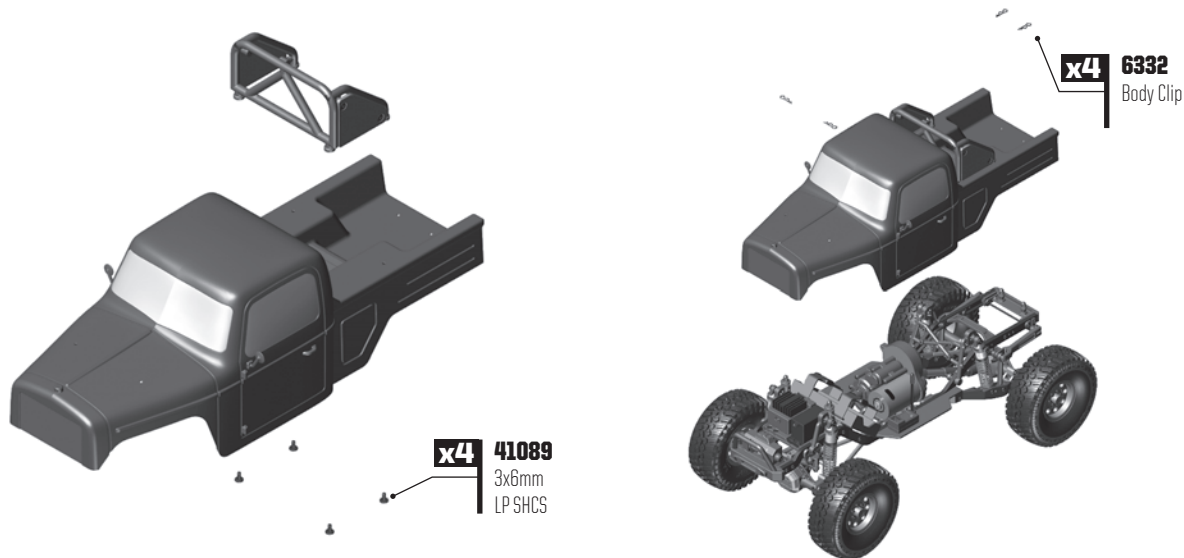


## GATE 02 CAGE BUILD: BAG 10



## 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.

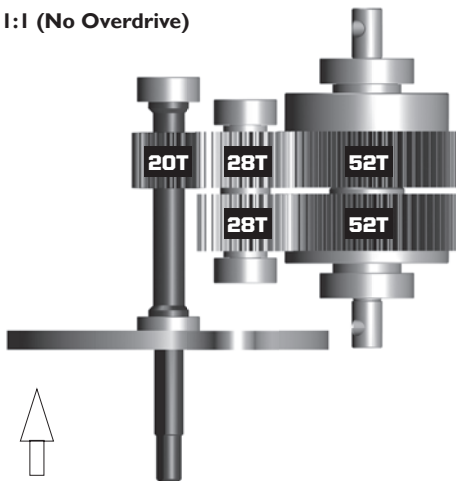
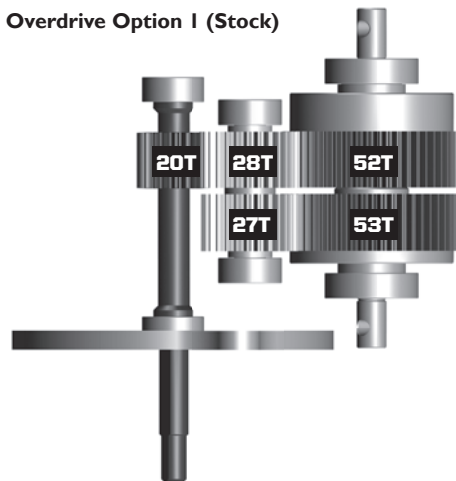
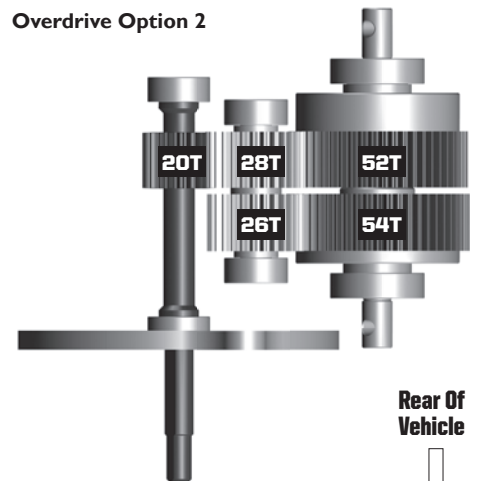
**Stealth X:**

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.

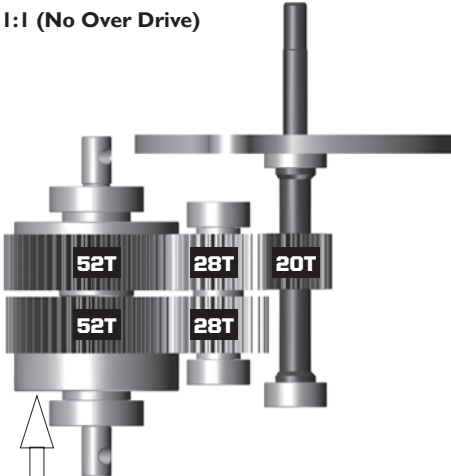
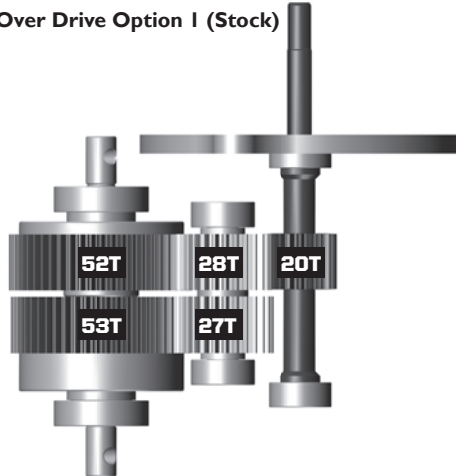
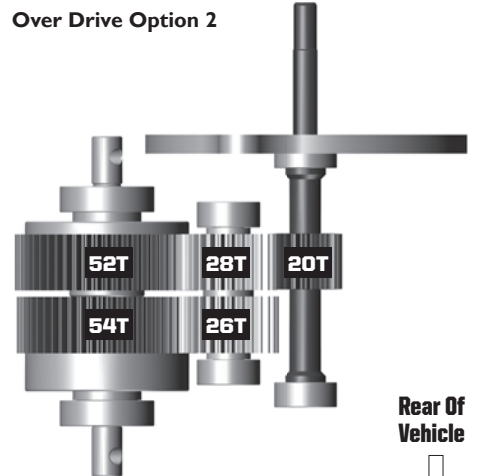
**GATE 02** STEALTH X: BUILD CONFIGURATION: MOTOR MOUNT FACING REAR (STOCK)

**1:1 (No Overdrive)**

**Overdrive Option 1 (Stock)**

**Overdrive Option 2**


Front Of Vehicle

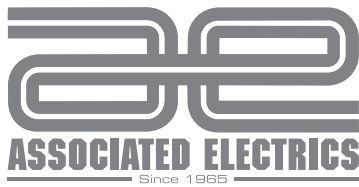
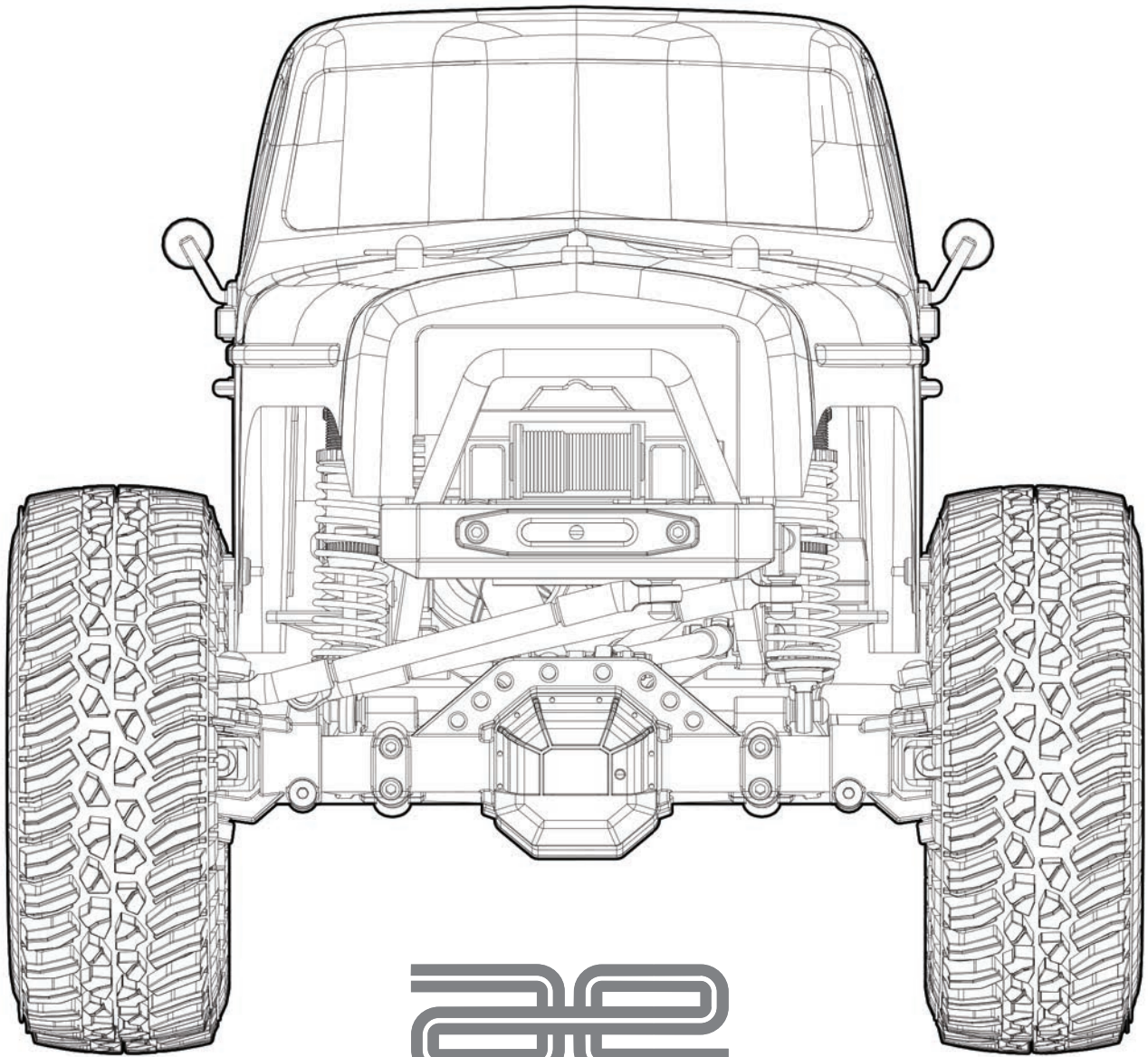
Rear Of Vehicle

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

**1:1 (No Over Drive)**

**Over Drive Option 1 (Stock)**

**Over Drive Option 2**


Front Of Vehicle

Rear Of Vehicle



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