

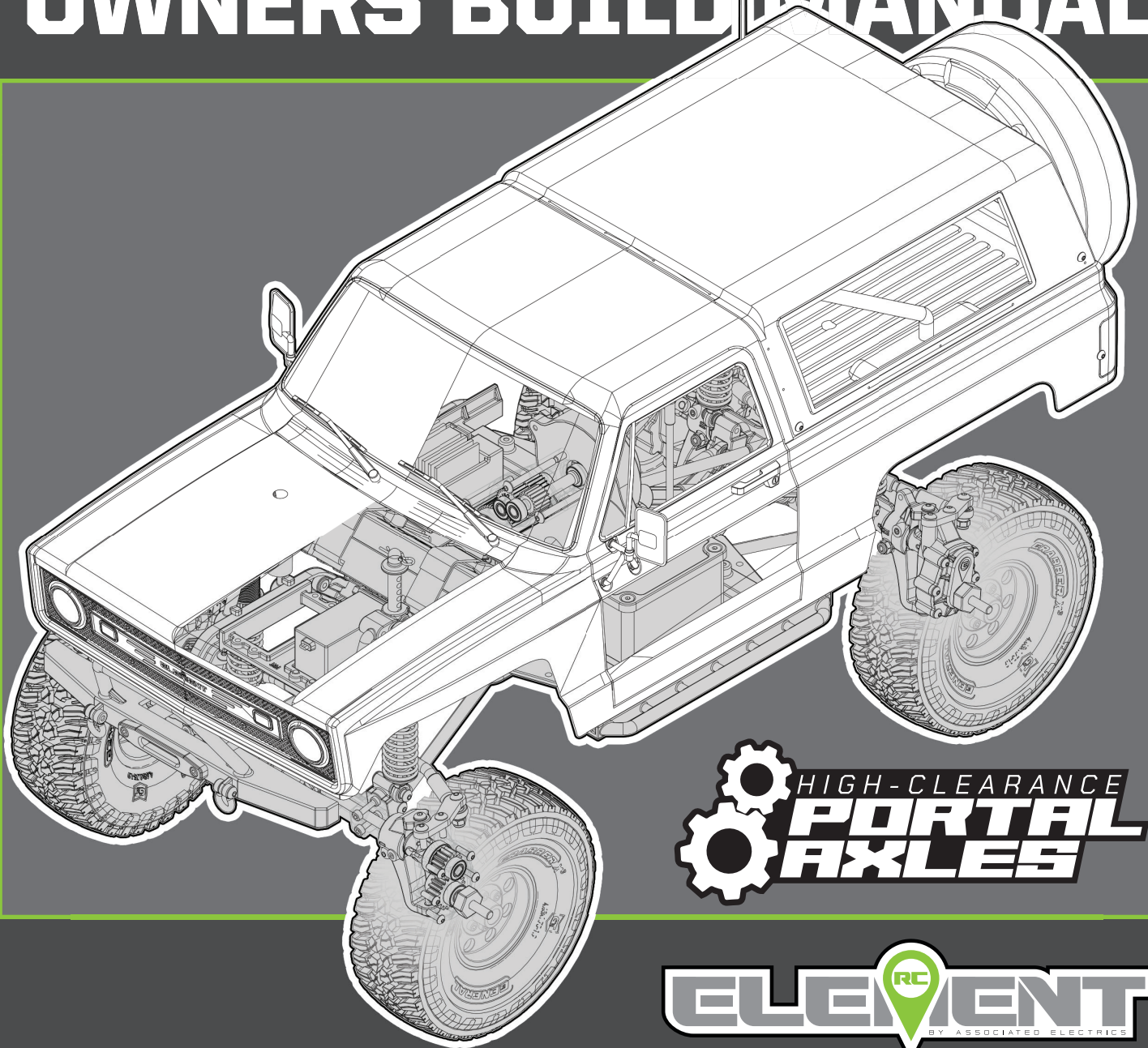
ENDURO

WITH TRAILING ARM SUSPENSION

TRAILWALKER
PORTAL PLUS RTR



OWNERS BUILD MANUAL



HIGH-CLEARANCE
**PORTAL
AXLES**

ELEMENTTM
BY ASSOCIATED ELECTRICS



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Lake Forest, CA 92630

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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.

TRAILWALKER PORTAL PLUS RTR

A PERFORMANCE RIG BUILT TO ENDURE. When hitting the trail, you want to do it with confidence and the answer is the Enduro Trailwalker Portal Plus Trail Truck!

At the heart of the Enduro Trailwalker Portal Plus 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.

As with all of our Enduro chassis, the steering link assembly has been relocated 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 Ecto Portal RTR features new high-clearance portal axles. These new portal axles include all-metal gears, ball bearings, and a new larger pocket for a heavier-duty inner input bearing. With almost an inch more clearance than our standard straight axles, these axles are a perfect fit for the Enduro line-up.

The Enduro Trail Truck comes ready for adventure right out of the box, with performance-driven electronics. The ultra-smooth and powerful 14-turn 5-slot brushed crawler motor is matched with a 2-in-1 electronic speed controller and receiver. Controlling the beast on the trail is a 4-channel 2.4GHz radio and Reedy Power high-torque metal gear servo.

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










FEATURES

- NEW high-clearance portal axles
- NEW carbon fiber flat rail chassis
- NEW aluminum chassis braces and body mount supports
- NEW Delrin® machined and flush mounted angled lower skid plate
- NEW 2-piece forward-bias aluminum motor plate
- Factory Team aluminum threaded shocks
- Factory Team steel pivot balls
- Factory Team 5mm heavy-duty steel
- High-clearance links
- Servo-on-axle steering
- Universal front and rear drive axles
- Aluminum steering plates
- Optimized ball cups for more fluid axle articulation
- Telescopic driveshafts front and rear
- Extruded aluminum driveshaft splines
- Machined input pinion gears
- Metal ring gears
- Machined steel top shaft
- Metal ball bearings included
- Steel 25T servo horn

















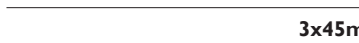
HARDWARE 1:1 SCALE VIEW

HARDWARE USED WITH OPTIONAL REPLACEMENT PART NUMBERS










FLAT HEAD SCREWS (FHCS)

	2.5x10mm (31350)
	2.5x14mm (41077)
	3x6mm (31541)
	3x8mm (25201)
	3x10mm (25202)
	3x12mm (25203)
	3x14mm (89208)
	3x20mm (89210)
	3x24mm (89233)





BUTTON HEAD SCREWS (BHCS)

	2x3mm (31509)
	2.6x10mm, Self Tapping (41088)
	3x4mm (91158)
	3x5mm (31530)
	3x6mm (31531)
	3x8mm (31532)
	3x10mm (25211)
	3x12mm (89202)
	3x14mm (25187)
	3x16mm (89203)
	3x18mm (2308)
	3x20mm (25188)
	3x22mm (25189)
	3x24mm (89204)
	3x26mm (89205)
	3x28mm (41078)
	3x45mm (71037)





SOCKET HEAD SCREWS (SHCS)

	2x5mm (31511)
	2x8mm (7187)
	2.5x6mm (41079)
	2.5x8mm (89222)
	2.5x10mm (41087)
	2.5x14mm (71032)
	2.5x16mm (41086)
	2.6x10mm (42332)
	3x6mm (41089)



LP SOCKET HEAD SCREWS (LP SHCS)

	3x6mm (41089)
	3x10mm (41090)
	3x16mm (41092)
	3x20mm (41091)



SET SCREWS

	3x3mm (25225)
	3x6mm (81257)
	3x16mm (4689)
	4x16mm (4677)





PIVOT BALLS

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






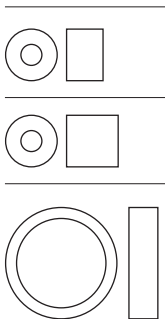
LOCK NUTS

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

BEARINGS

	5x10x4mm (91560)
	5x12x4mm (91567)
	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)
	Pin 2x9mm (31872)
	Pin 2x11mm (42019)

TABLE OF CONTENTS

11/12/2024

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06	ELECTRONIC MOUNTS BUILD		
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08	FRONT / REAR PORTAL AXLES BUILD		
10	LINKS BUILD		

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.



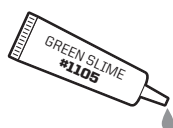
This symbol indicates the order within a step to assemble parts.



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.

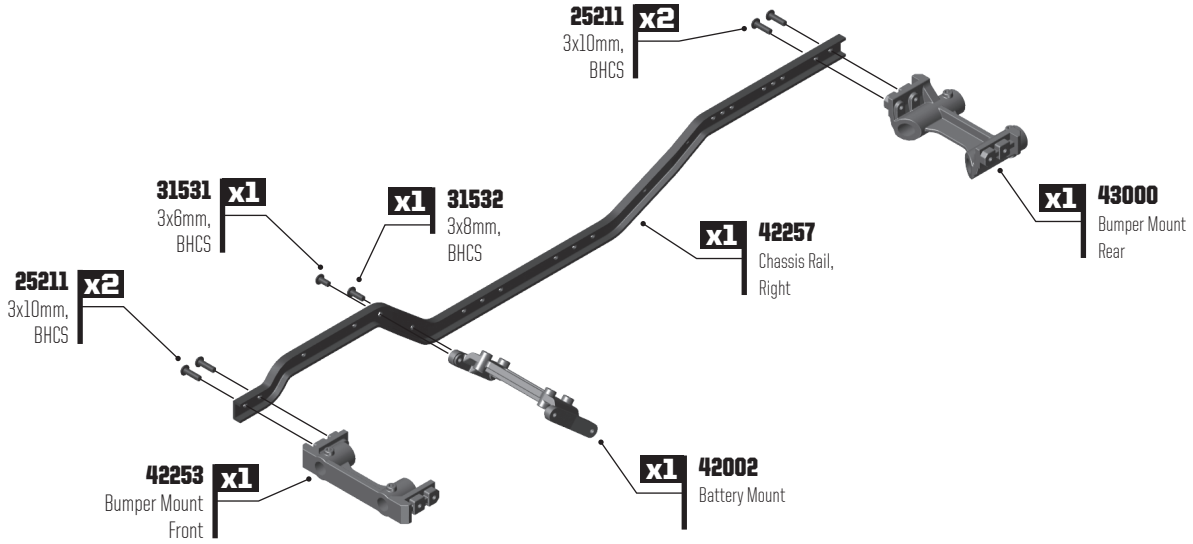


This symbol indicates where Shock Fluid should be applied.

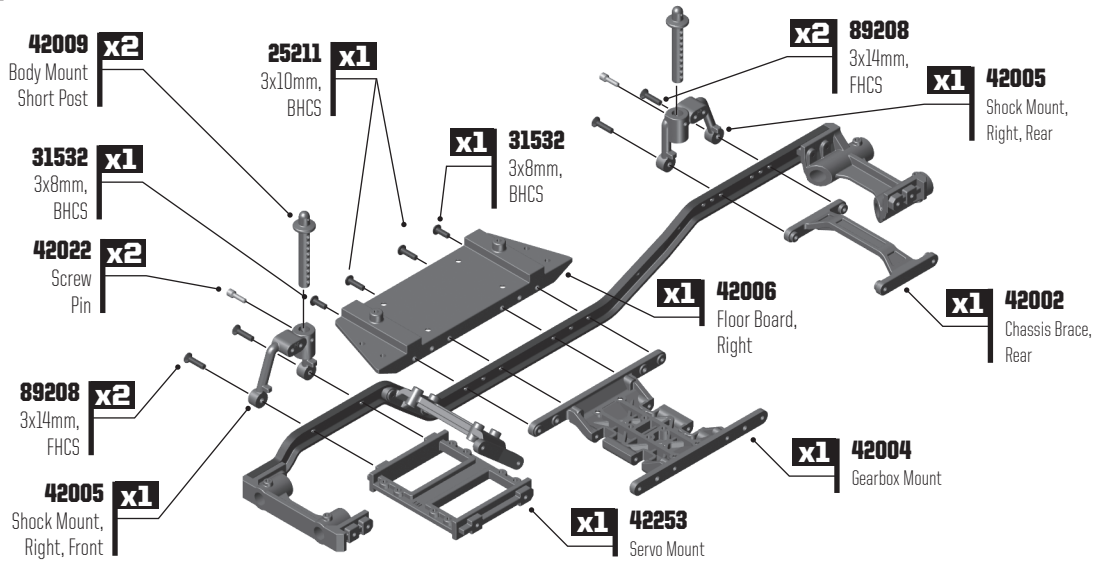


There is a 1:1 hardware foldout page in the front of the manual. To check the size of a part, line up your hardware with the correct drawing until you find the exact size. Each part in the foldout has a number assigned to it for ordering replacement parts.

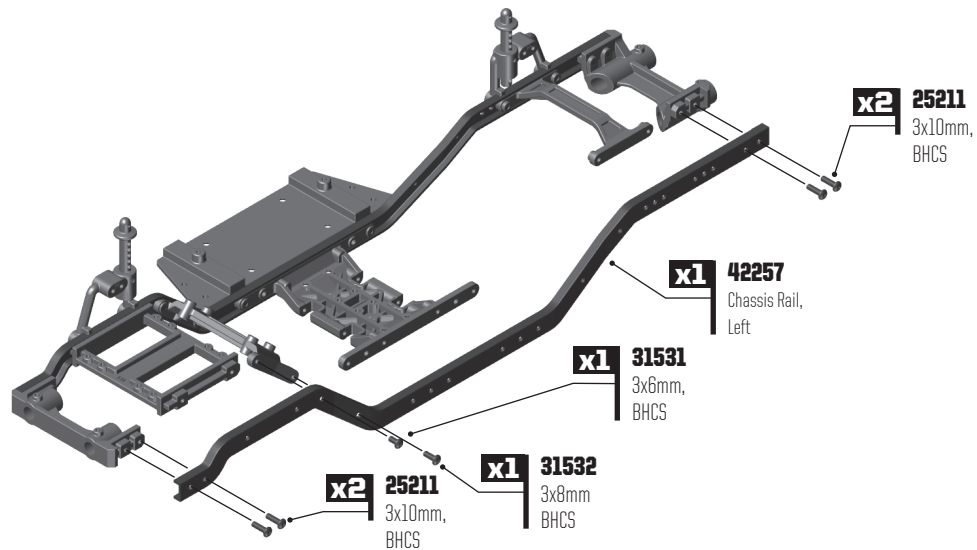
GATE 01 CHASSIS BUILD



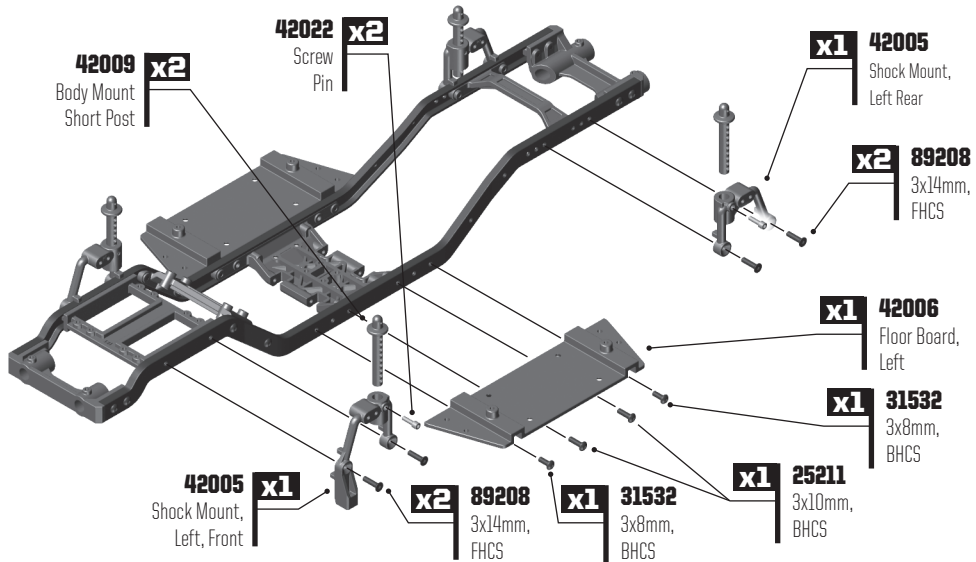
GATE 02 CHASSIS BUILD



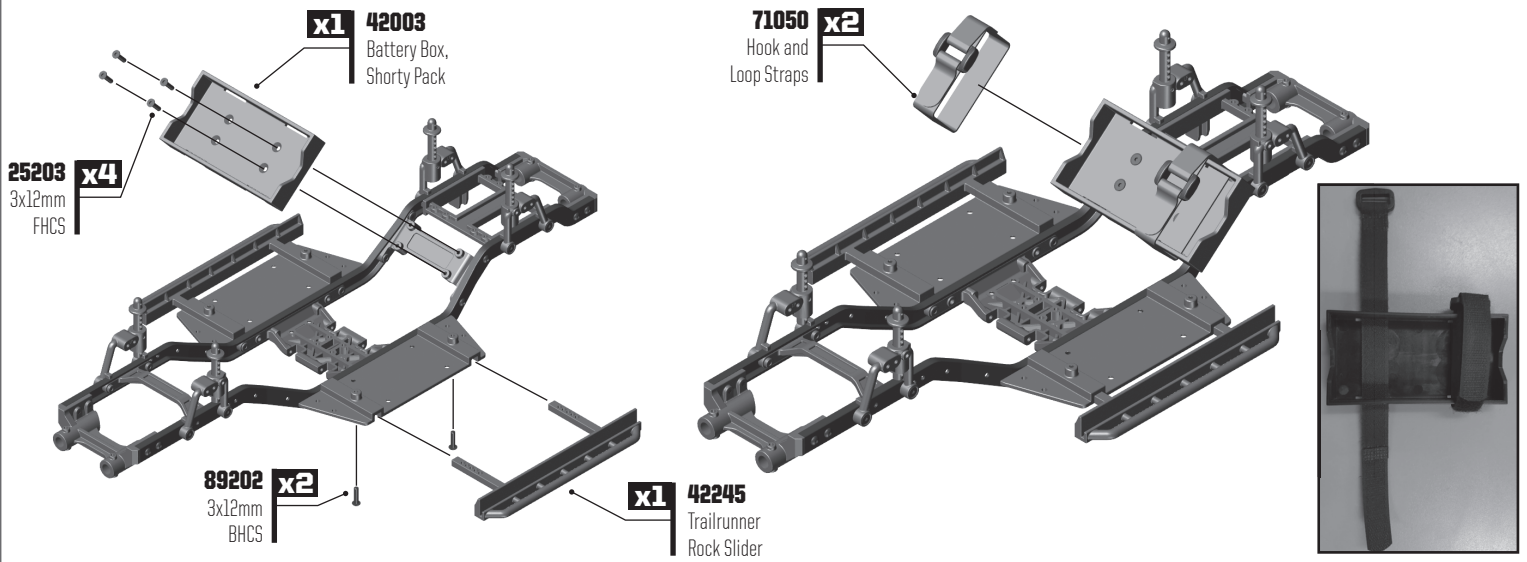
GATE 03 CHASSIS BUILD



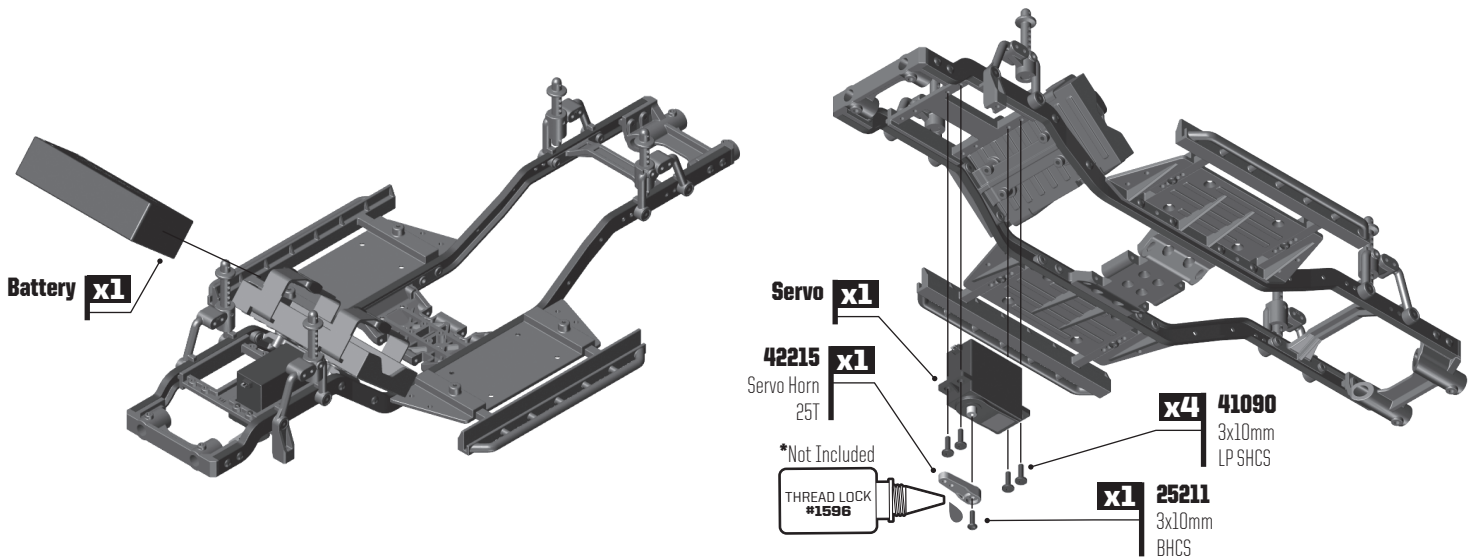
GATE 04 CHASSIS BUILD



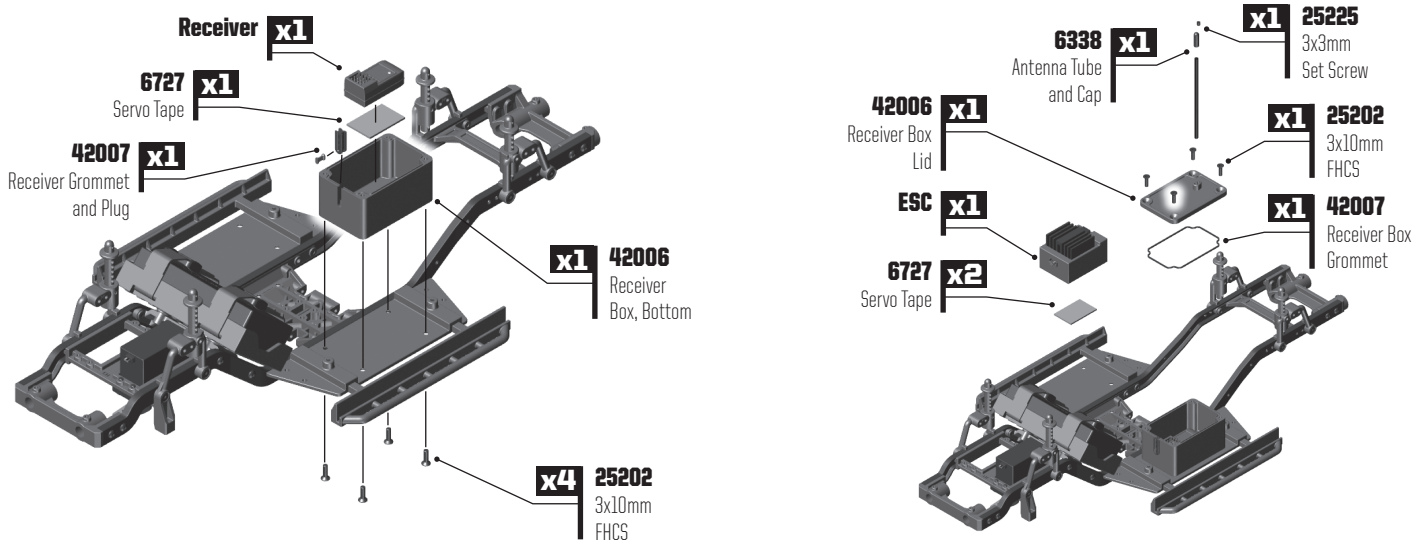
GATE 01 ELECTRONIC MOUNTS BUILD



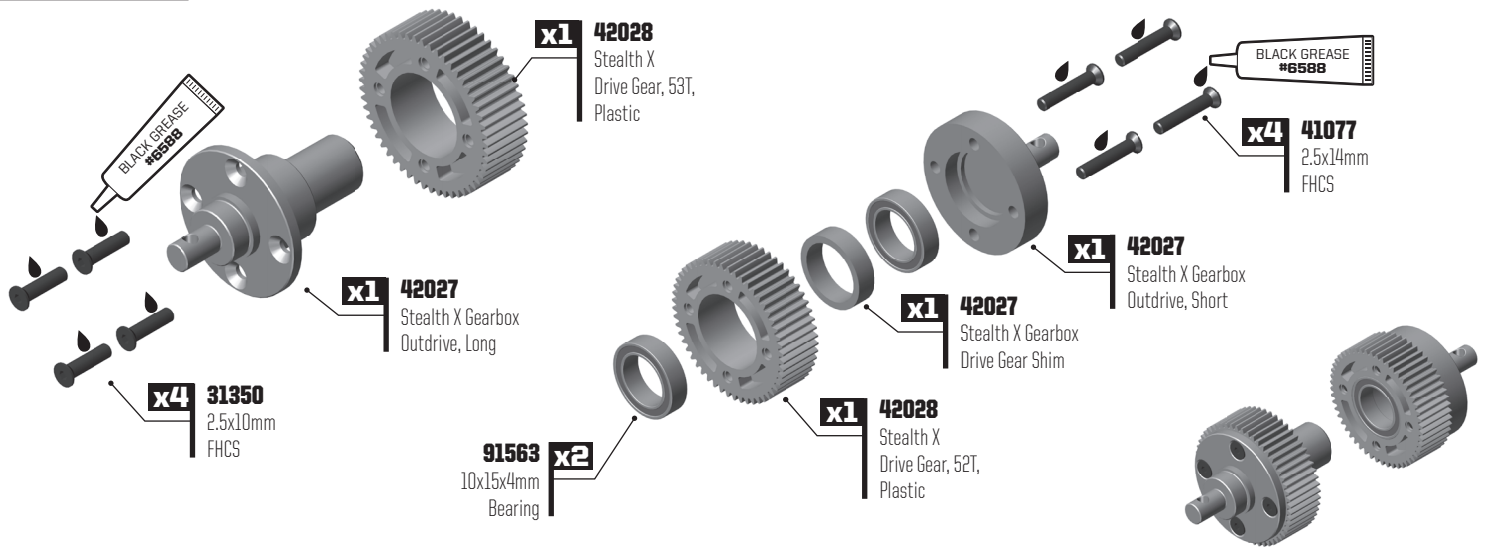
GATE 02 ELECTRONIC MOUNTS BUILD



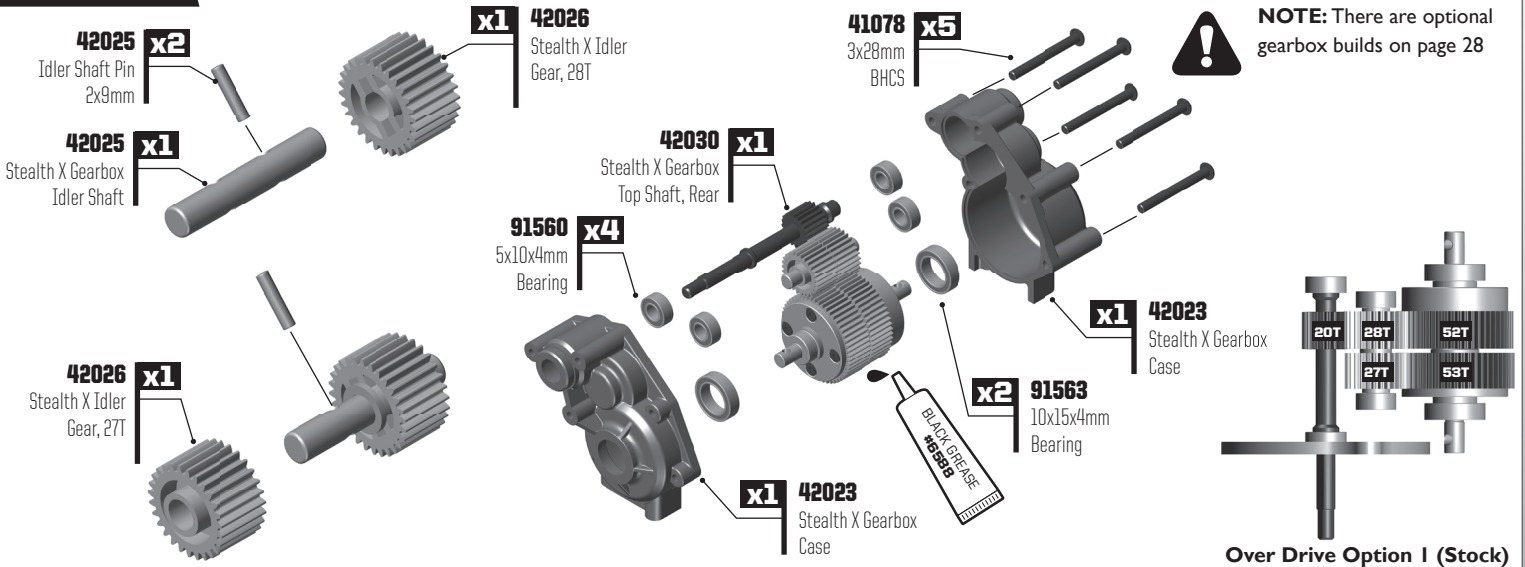
GATE 03 ELECTRONIC MOUNTS BUILD



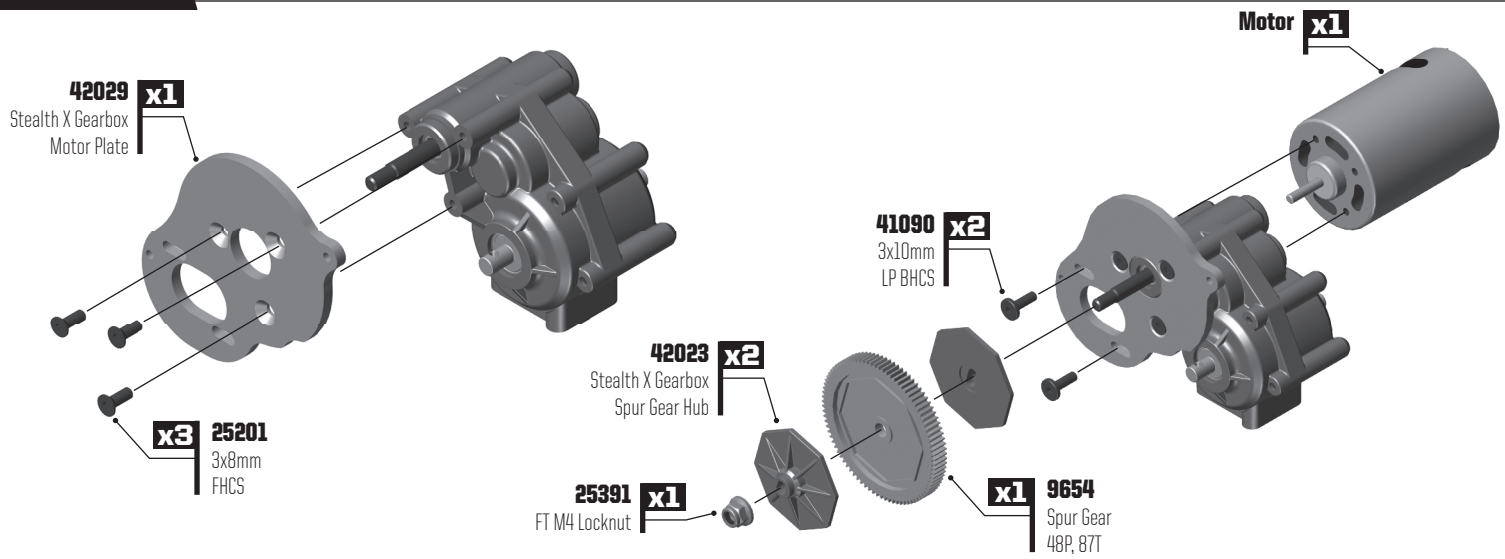
GATE 01 GEARBOX BUILD



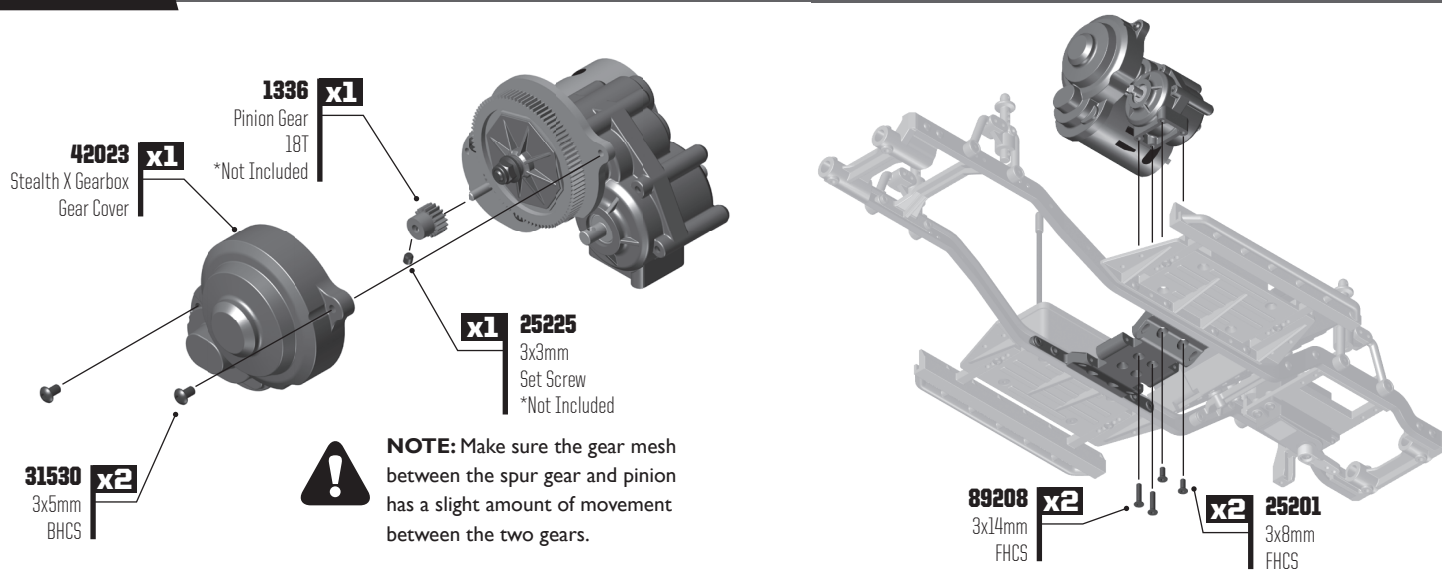
GATE 02 GEARBOX BUILD



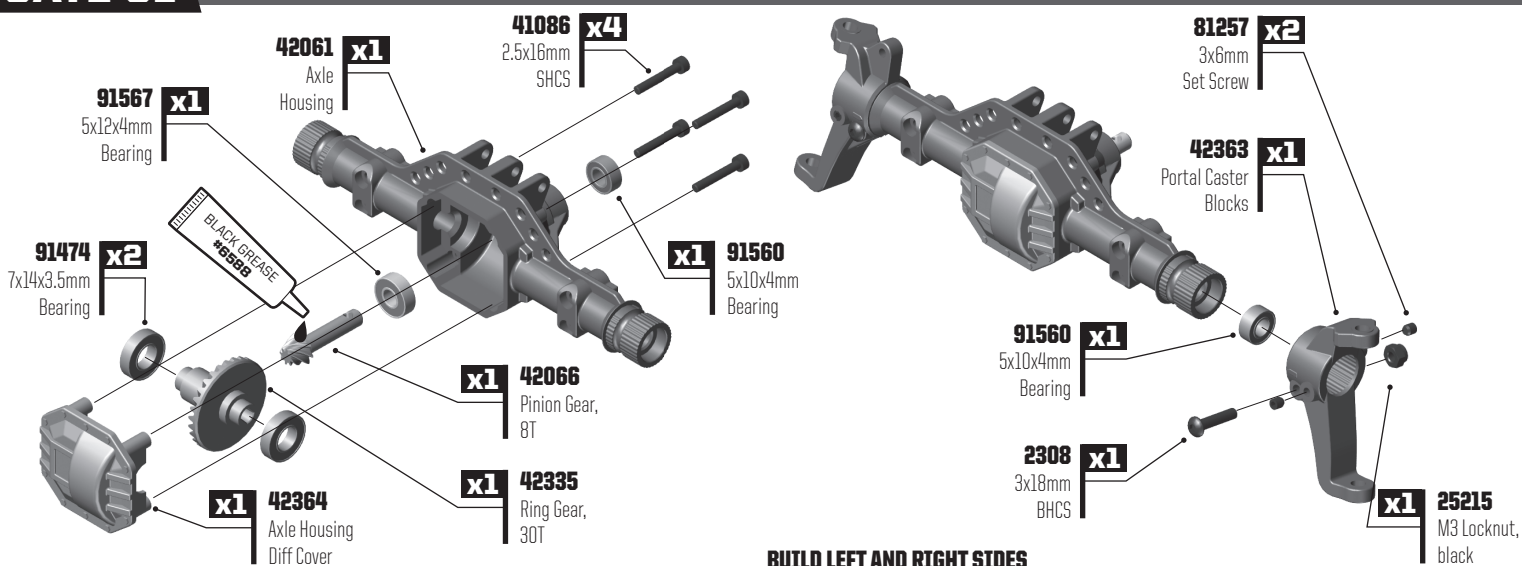
GATE 03 GEARBOX BUILD



GATE 04 GEARBOX BUILD



GATE 01 FRONT AND REAR PORTAL AXLE BUILD



GATE 02 FRONT AND REAR PORTAL AXLE BUILD

x1 42367 Portal Universal Driveshaft

x1 42365 Portal Axle Box

x1 91563 10x15x4mm Bearing

x1 42372 Portal Gear, 15T

x1 25618 5x11x4mm Bearing

x1 42369 Portal Axle Shaft

x1 42393 2.5x12mm Pin

x1 42372 Portal Gear, 20T

x1 91560 5x10x4mm Bearing

BLACK GREASE #6588

x1 25618 5x11x4mm Bearing

x1 42365 Portal Axle Cover

x6 31521 2.5x8mm SHCS

BUILD LEFT AND RIGHT SIDES

GATE 03 FRONT AND REAR PORTAL AXLE BUILD

x2 42070 3x10mm Shoulder Screw

x1 42364 Lower 4-Link Mount

x1 42069 Wheel Hex

x2 71032 2.5x14mm SHCS

x1 42019 Wheel Hex Pin

BUILD LEFT AND RIGHT SIDES

GATE 04 FRONT PORTAL AXLE BUILD

FRONT AXLE BUILD

x2 89202 3x12mm BHCS

x2 25211 3x10mm BHCS

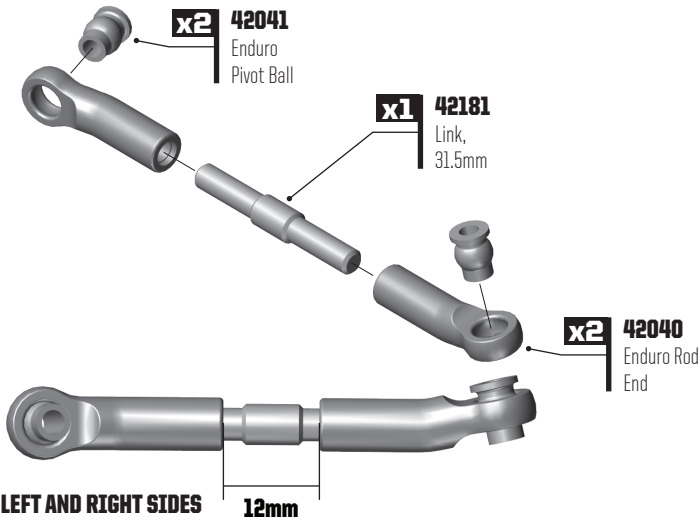
x3 42366 Portal Steering Plate

FRONT AXLE COMPLETE

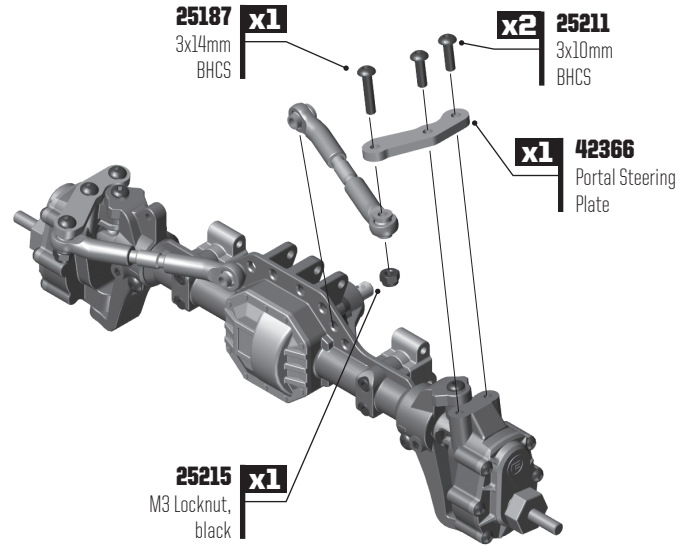
BUILD LEFT AND RIGHT SIDES

GATE 05 REAR PORTAL AXLE BUILD

REAR AXLE BUILD

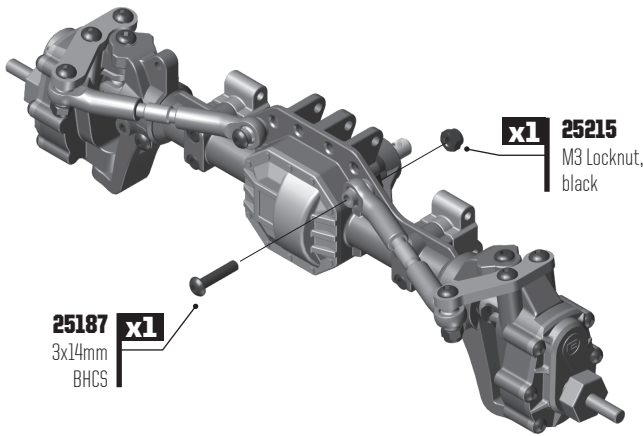


BUILD LEFT AND RIGHT SIDES

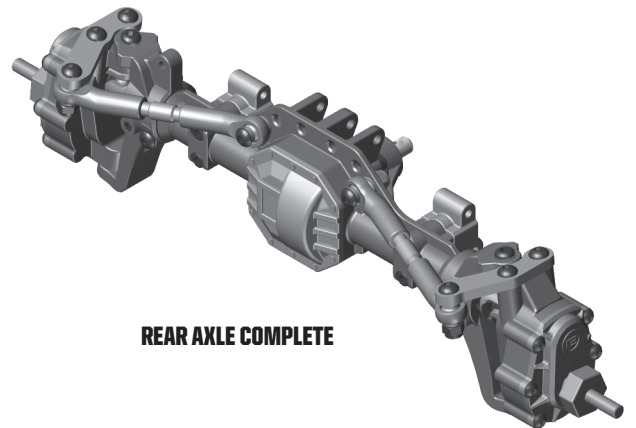


GATE 06 REAR PORTAL AXLE BUILD

REAR AXLE BUILD



BUILD LEFT AND RIGHT SIDES

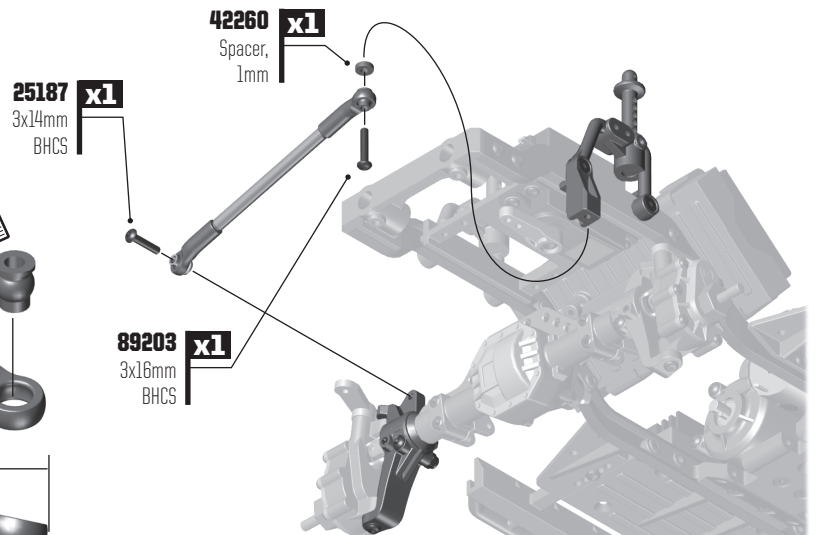
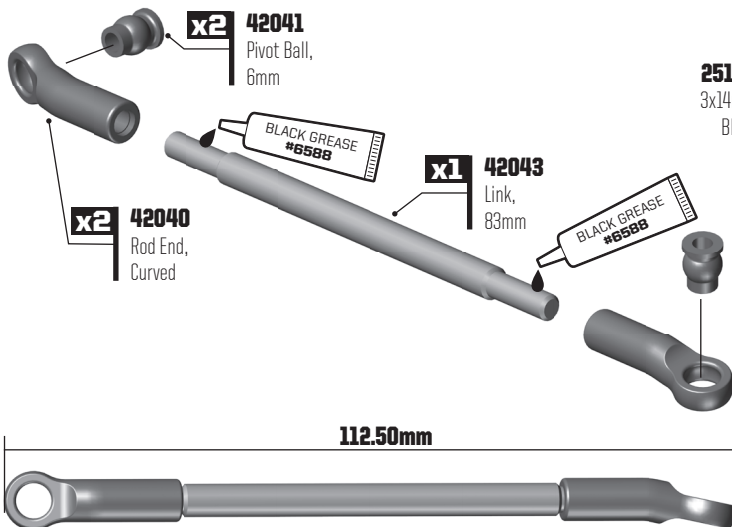


REAR AXLE COMPLETE

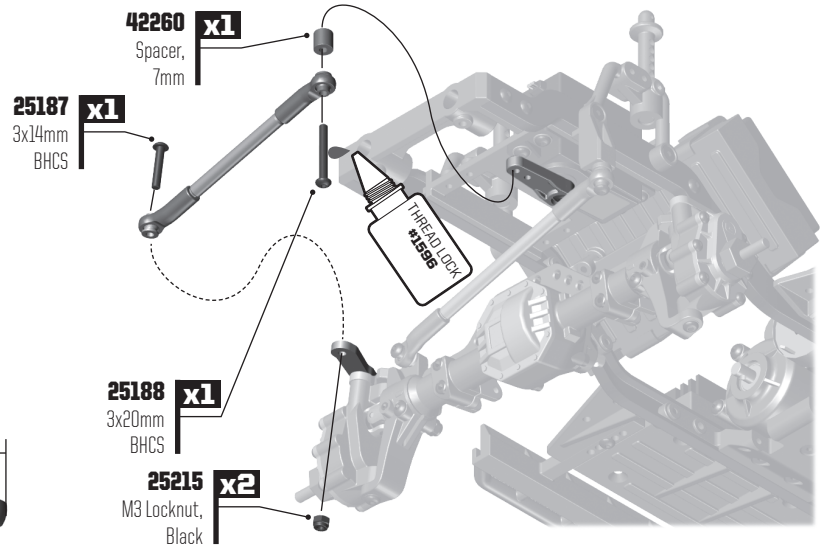
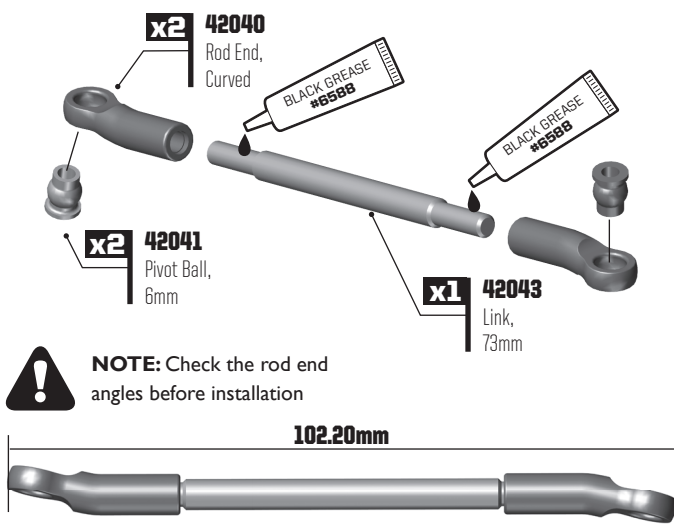


NOTE: Adding Portal Axles to your crawler will increase the torque and reduce your gear ratio. It is recommended to use a 78T spur gear with these Portal Axles in order to achieve the proper ratio for crawling.

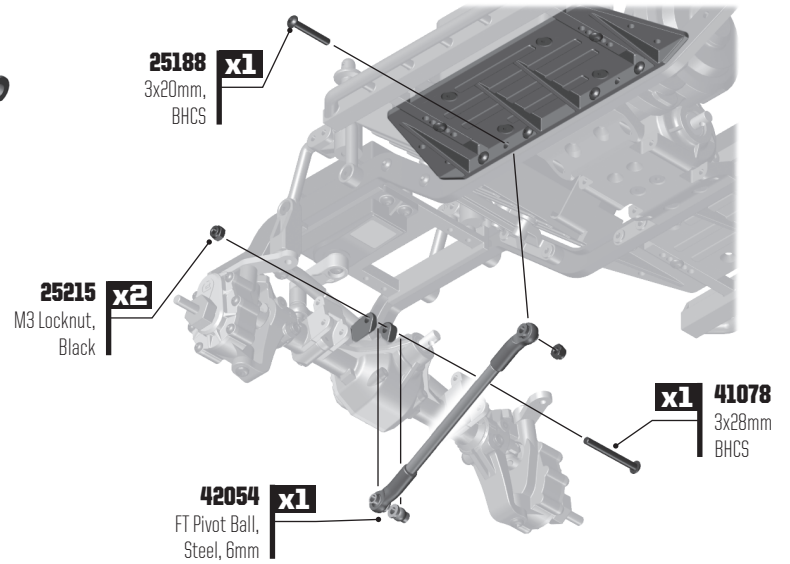
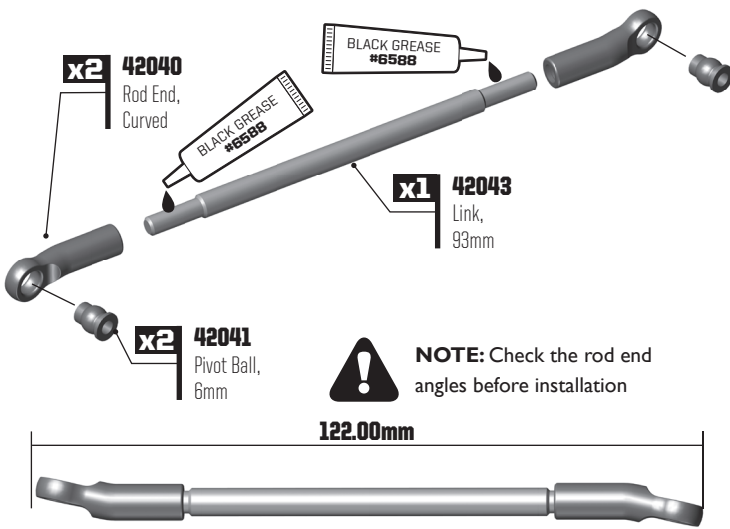
GATE 01 LINKS BUILD



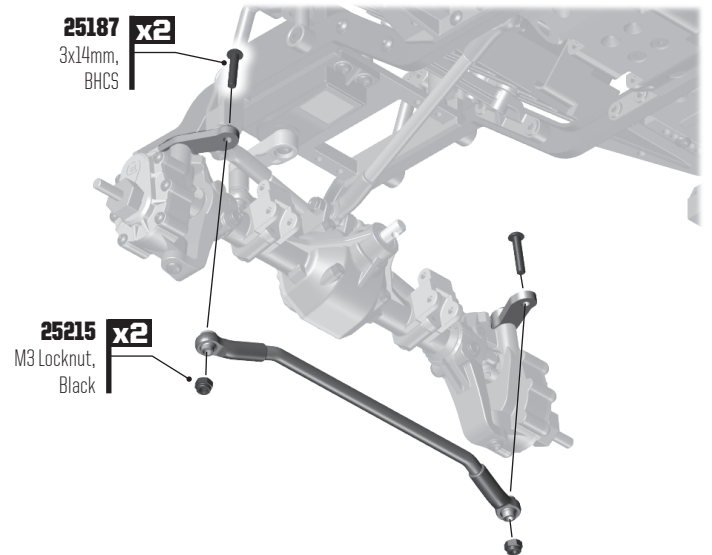
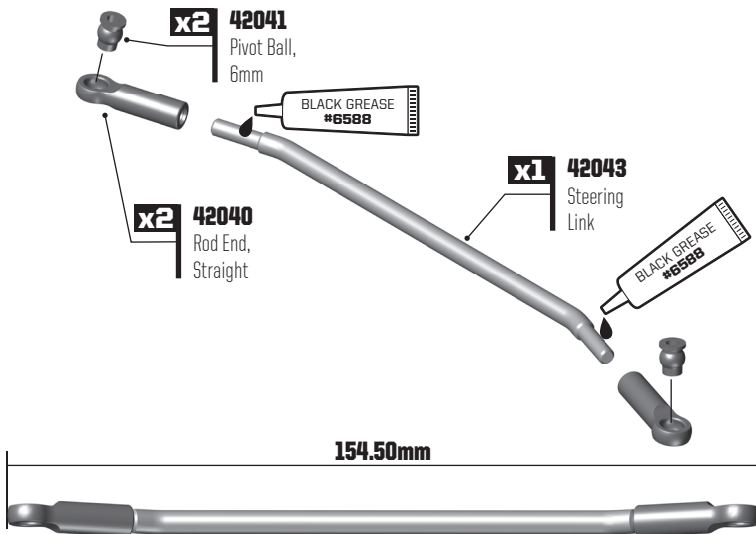
GATE 02 LINKS BUILD



GATE 03 LINKS BUILD



GATE 04 LINKS BUILD



GATE 05 LINKS BUILD

NOTE: Build and install two front lower links

- x2** 42041 Pivot Ball, 6mm
- x1** 42043 Link, 100mm
- x2** 42040 Rod End, Curved

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

NOTE: Build and install two rear upper links

- x2** 42041 Pivot Ball, 6mm
- x1** 42018 Link, 121mm
- x2** 42040 Rod End, Curved

BLACK GREASE #6588

NOTE: Check the rod end angles before installation

150.00mm

- x1** 25188 3x20mm, BHCS
- x1** 41078 3x28mm BHCS
- x2** 25215 M3 Locknut, Black

GATE 07 LINKS BUILD

- x2** 42040 Rod End, Curved
- x1** 42018 Link, 127mm
- x2** 42041 Pivot Ball, 6mm

BLACK GREASE #6588

156.00mm

- x1** 25187 3x14mm BHCS
- x1** 4689 3x16mm Set Screw

GATE 01 DRIVE SHAFTS BUILD

42021 Drive Shaft Pin, 2x11mm (x2)

42020 Drive Shaft, Female (33mm, 42mm) (x1)

31532 3x8mm BHCS (x2)

42021 Drive Shaft, Male, CVA (x2)

42021 Drive Shaft Barrel (x2)

42018 Drive Shaft, Male (75mm, rear) (x1)

42020 Drive Shaft, Male (48mm, 60mm) (x1)

42020 Pin Retainer, Short (x1)

42020 Pin Retainer, Long (x1)

42020 Gearbox Side

42020 Axle Side

NOTE: Build a front and rear drive shaft

Drive Shaft Lengths

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

GATE 02 DRIVE SHAFTS BUILD

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.

FRONT

REAR

42022 x4 Screw Pin

Correct Phasing

Incorrect Phasing

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

GATE 03 DRIVE SHAFTS BUILD

NOTE: Install the front drive shaft

NOTE: Install the rear drive shaft

GATE 01 SHOCK BUILD

SHOCK CAP O-RING

SHOCK COLLAR O-RING

x1 42081 Shock Piston

x2 6299 E-Clip

x1 42083 Shock Shaft, 3x30mm

x1 42081 O-Ring, Shock Cap

x1 42082 Shock Body, Silver, 10x32mm

x2 5407 O-Ring, Red

x1 42081 Shock O-Ring Spacer

SHOCK FLUID #5422

31392 3x5x0.3mm Washer

x1 42080 Shock Bottom Cap, Plastic

x1 42040 Enduro Rod Ends

NOTE: Build 4 complete shocks

GATE 02 SHOCK BUILD

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 fluid in the cap and on cap threads.
7. Install cap (without bleeder screw) and tighten completely.
8. Slowly compress shaft all the way to bleed excess silicone shock fluid out the bleeder hole in the shock cap (use rag around shock to catch excess fluid).
9. Install M2x4mm button head cap screw until snug while shaft is fully compressed.

SHOCK FLUID #5422

SHOCK FLUID #5422

NOTE: Build 4 complete shocks

x1 31864 Shock Cap, Bleeder

31510 2x4mm BHCS

Steps 1-2 **Steps 3-4** **Steps 5-6** **Step 7** **Steps 8-9**

GATE 03 SHOCK BUILD

SHOCK CAP O-RING

SHOCK COLLAR O-RING

x1 42081 O-Ring, Shock Collar

x1 31864 Shock Collar, Plastic

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

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

3mm

NOTE: Build 4 complete shocks

GATE 04 SHOCK BUILD

x1 42041 Pivot Ball, Upper Shock

x1 41091 3x20mm LP SHCS

x1 25187 3x14mm BHCS

42041 x1 Pivot Ball, 6mm

x1 2308 3x18mm BHCS

GATE 01 BUMPER / WHEELS & TIRES / BODY BUILD

x1 42146 Trail Walker Bumper, Front

x2 42146 Trail Walker Bumper, Mount

x2 31532 3x8mm, BHCS

41086 x2 2.5x16mm SHCS

x1 42146 Trail Walker Fairlead

x2 42146 D-Ring, Molded

x2 89203 3x16mm BHCS

GATE 02 BUMPER / WHEELS & TIRES / BODY BUILD

x1 42177 The Ocho Inner Wheel, Bronze

x1 42106 Tire, General Grabber X3

x1 42106 Tire, Insert

x1 42177 The Ocho Ring, Bronze

x1 42177 The Ocho Hex Adapter, Bronze

x1 42177 The Ocho Outer Wheel, Bronze

x6 41088 2.6x10mm BHCS

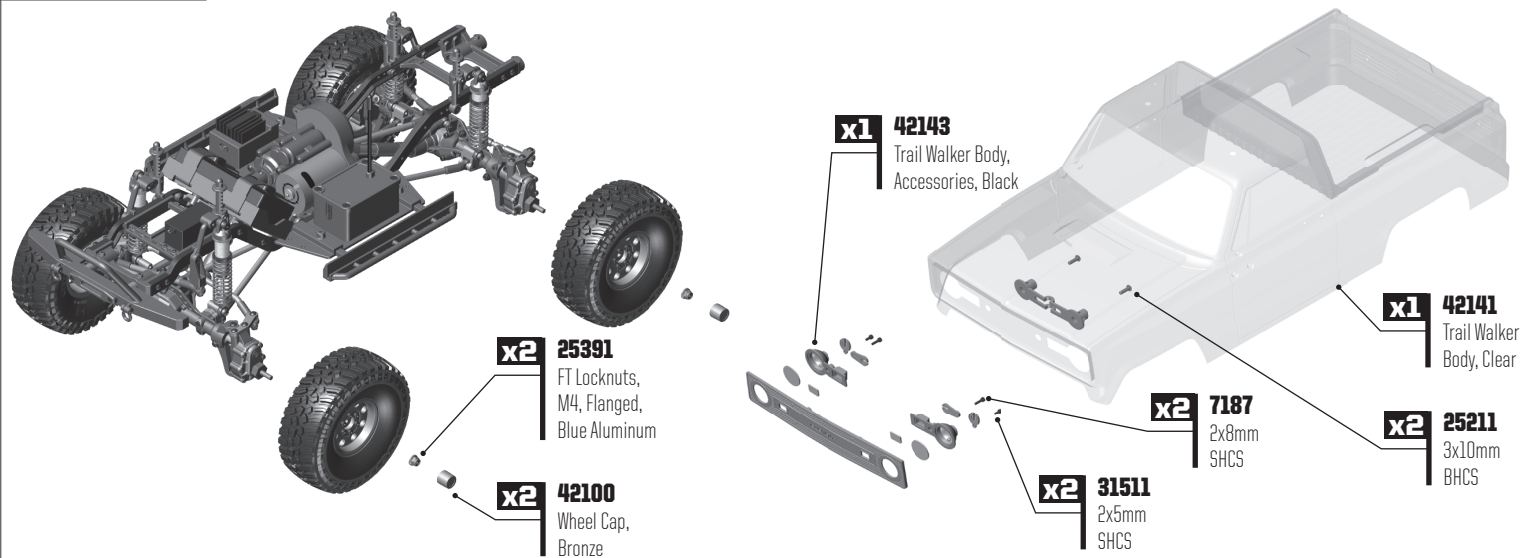
NOTE: Install #41088 screws in a crossing pattern

NOTE: Build 4 wheels/tires

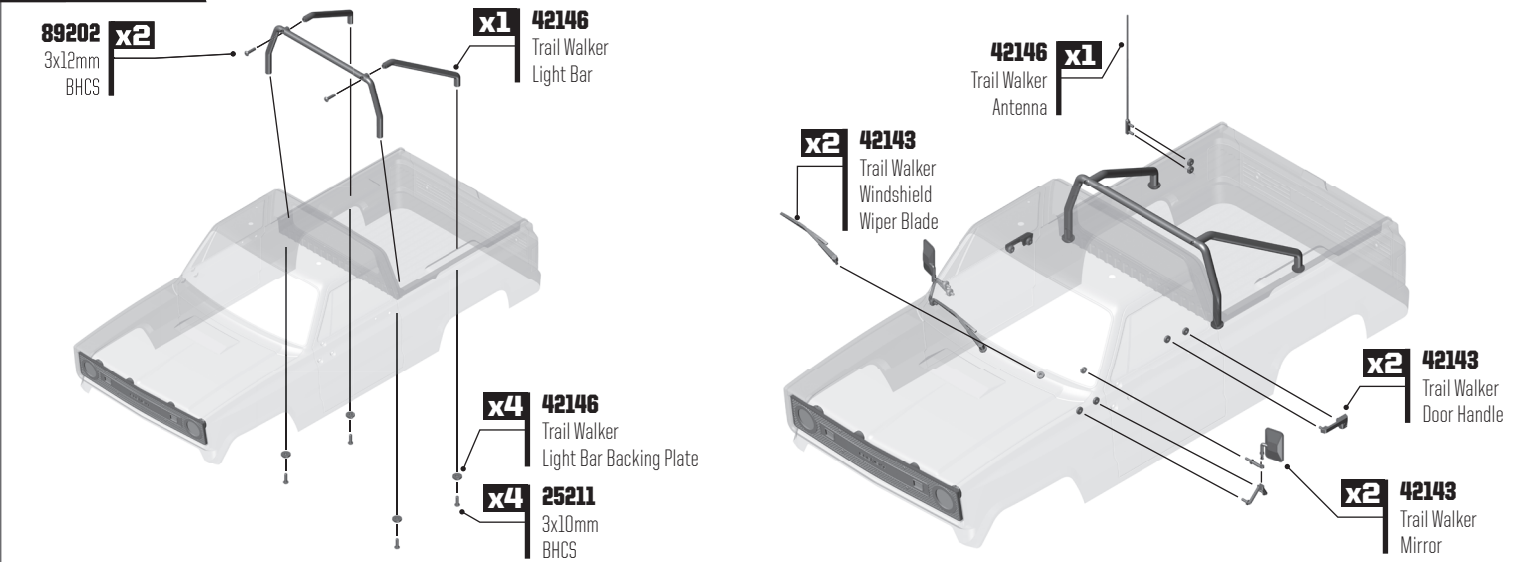
Wheels - 1.9"

#42100 - Method 701, Bronze
#42101 - Method 701, Black
#42108 - The Ocho, Silver
#42109 - The Ocho, Black
#42177 - The Ocho, Bronze
#42328 - Steelie, Black

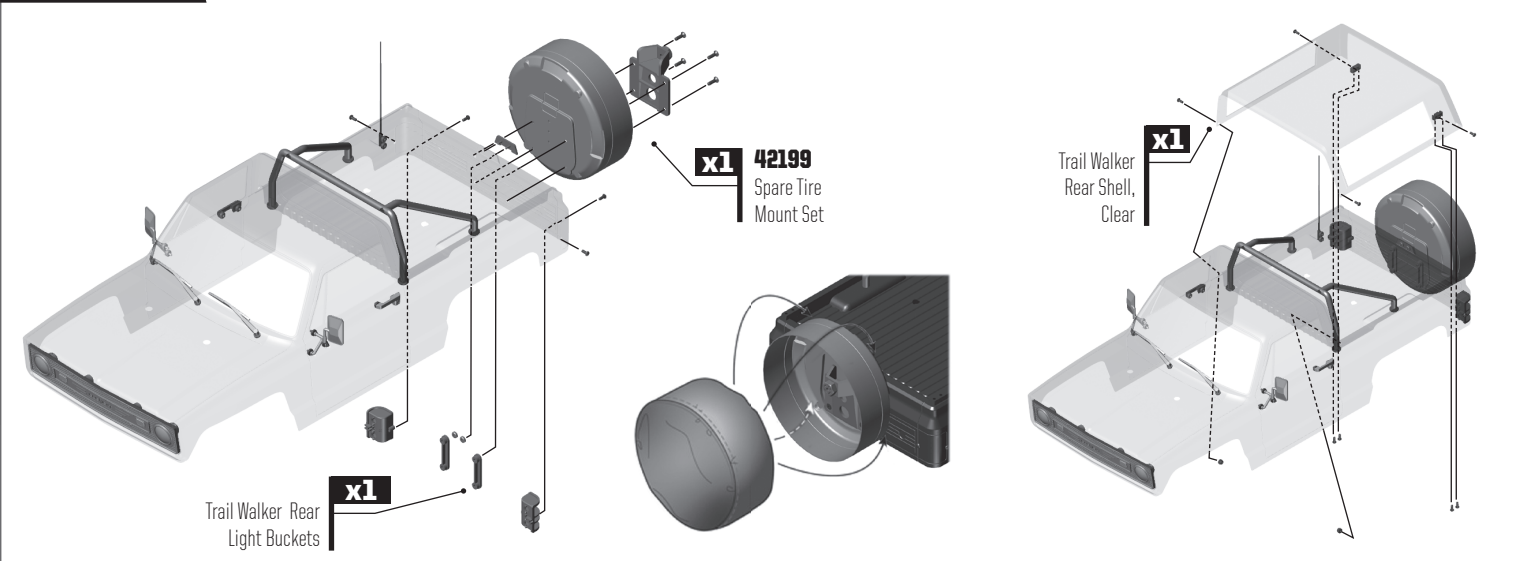
GATE 03 BUMPER / WHEELS & TIRES / BODY BUILD



GATE 04 BUMPER / WHEELS & TIRES / BODY BUILD

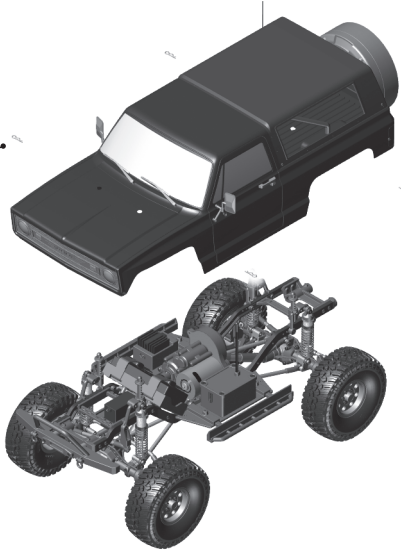


GATE 05 BUMPER / WHEELS & TIRES / BODY BUILD



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

6332 x4
Body Clips



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:

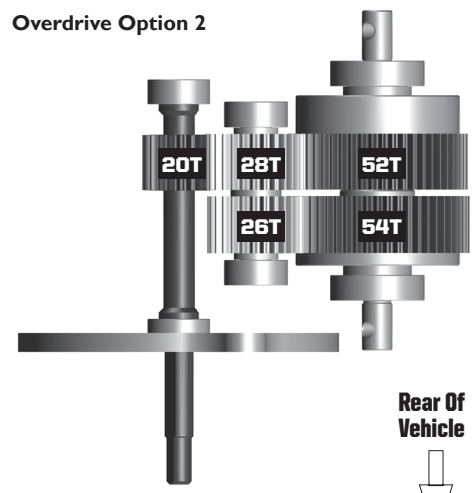
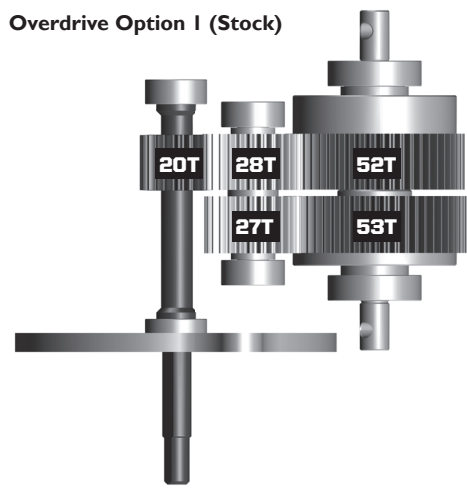
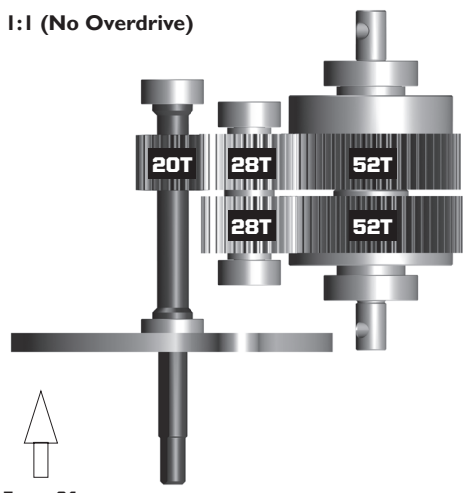
The 20T top shaft, 28T idler gear, and 52T drive gear will always be meshed together in all 6 gearbox configurations.

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

1:1 (No Overdrive)

Overdrive Option 1 (Stock)

Overdrive Option 2

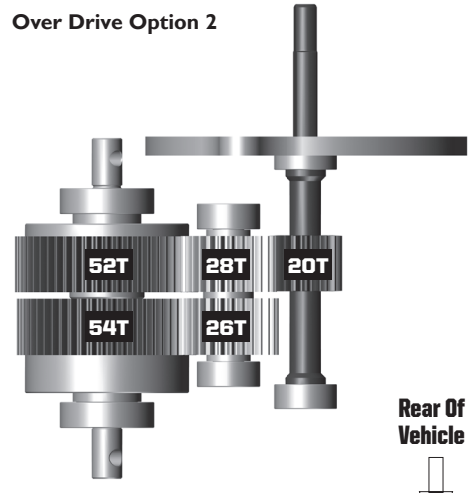
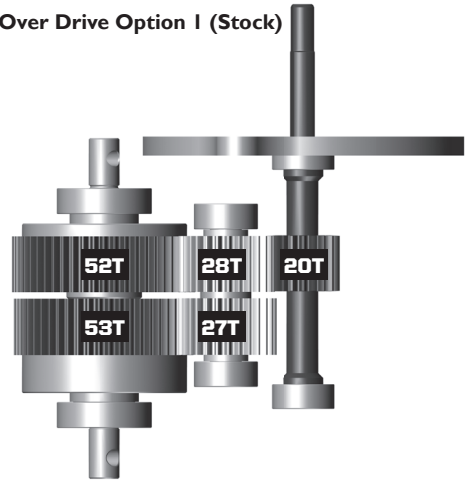
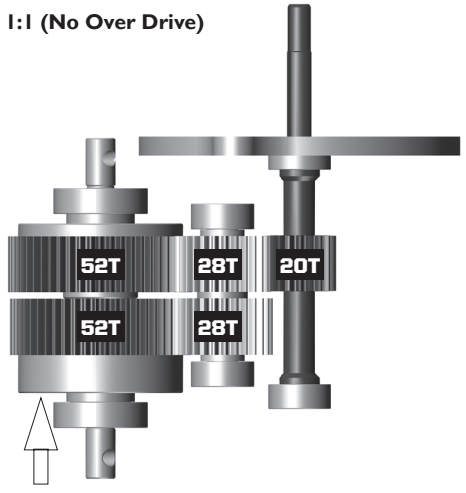


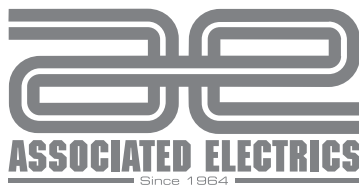
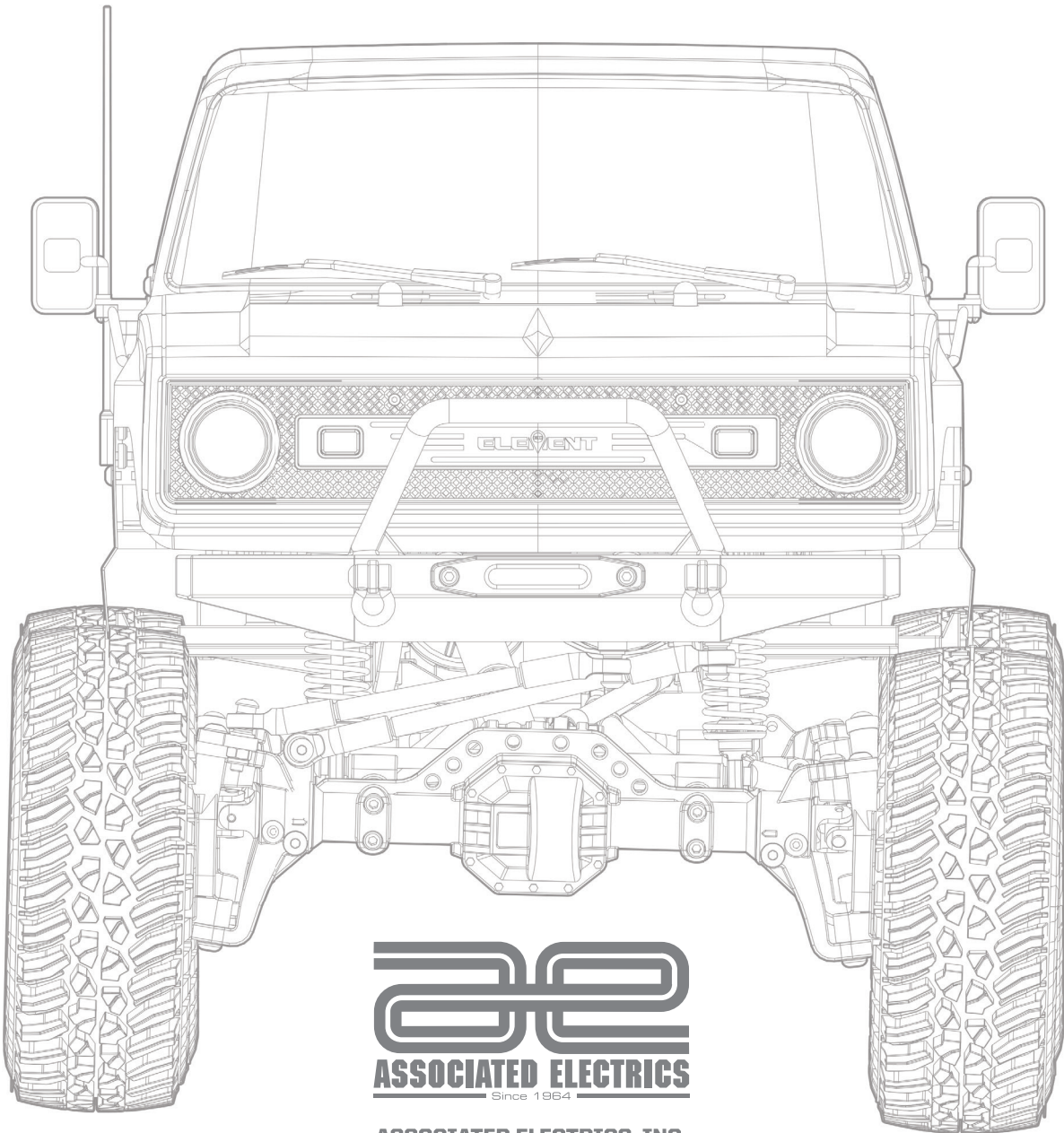
GATE 03 STEALTH X: BUILD CONFIGURATION: MOTOR MOUNT FACING FRONT (OPTIONAL - REQUIRES #42024 - TOP SHAFT)

1:1 (No Over Drive)

Over Drive Option 1 (Stock)

Over Drive Option 2





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