



124 QHR GT12

(124-QHR-GT12)

Build Guide

(25.12.22.01)

WARNING! DO NOT leave this kit, assembled or unassembled, in a hot motor vehicle or any other high temperature environment. This kit is 3D printed and high temperatures will harm or destroy the components.

Team QIK Build Guide

TEAM QIK PARTS

- ☐ 124-11 Chassis
- ☐ 124-12 Servo Keeper
- ☐ 12-13 Side Link (2)
- ☐ 12-14 Center Post
- ☐ 12-15 Side Arms (left & right)
- ☐ 12-16 Damper Set (3)
- ☐ 12-17 Front Body Post Mount
- ☐ 124-17-R Front Body Post Riser
- ☐ 12-18 Body Post Sleeve Set (2)
- ☐ 12-18T Body Post Sleeve Cap (TPU) (4)
- ☐ 12-19 Body Post Set (2)
- ☐ 12-21 Pod
- ☐ 12-22 Carrier (2)
- ☐ 12-23 Top Brace
- ☐ 12-24 Damper Mount
- ☐ 12-25 Lower Spindle (2)
- ☐ 12-26 Rear Ride Height Shim Set (2)
- ☐ 12-28 Motor Plate
- ☐ 12-30 Rear Spool
 - ☐ 12-31 Rear Hub (2)
 - ☐ 12-32 Spur Disk (2)
 - ☐ 12-33 Rear Axle Shim (2)
 - ☐ 12-34 Rear Axle
- ☐ 12-35 Rear Axle Plug (2)
- ☐ 12-42 Center Link (2 dot medium)
- ☐ 12-51-22 Front Arms (Left & Right)
- ☐ 12-52 Front Ride Height Shim Set (2)
- ☐ 12-53 Front Rocker & Cradle Set (2)
- ☐ 12-54 Front Axle Adaptor (2)

- ☐ 12-55-4 Toe Link Set (Left & Right)
- ☐ 12-56 Front Hubs (Left & Right)
- ☐ 12-57 Bump Shim (2)
- ☐ 12-58 114 Servo Saver Bushing (1)
- ☐ 124-62 Front Wire Keeper
- ☐ 12-71 RTR ESC Radio Strap
- ☐ 124-79 Battery Tray - 1500
- ☐ 12-101 Suspension Band (20)
- ☐ 12-103 Battery Strap Rubber Ring (1)
- ☐ 12-104 Servo (Yeah Racing YE-0030 Micro Servo)
- ☐ 12-105 Servo Saver (Kimbrough #114)

Make it a 12Q4 with the following QHR Completion Kit...

NRC QHR Completion Kit (Sold Separately)

- ☐ 12-108 HW 1625 Brushed ESC
- ☐ 12-109 48P 58T Spur Gear
- ☐ 12-110 48P 25T Pinion Gear
- ☐ Gravity Wheels & Tires
- ☐ NRC 35, 45, 55 Class Motors
 - ☐ 12-107-35 APEX 55T Brushed Motor
 - ☐ 12-107-45 APEX 45T Brushed Motor
 - ☐ 12-107-55 APEX 55T Brushed Motor

BODY (sold separately)

- ☐ GT12 Body (clear uncut & unpainted)

OPTIONAL PARTS

FAN

- ☐ 12-65 Fan Guard
- ☐ 12-86 Fan
- ☐ M3x25 (2)

STAND

- ☐ 12-92 Stand

Keepers, Cleanup, & Make IT Easy items

- ☐ 124-71 RTR ESC Radio Strap
- ☐ 124-72 HW 1625 ESC Strap
- ☐ 124-73 FS-GR3E Radio Strap
- ☐ 124-74 HW 1625 Switch Strap
- ☐ 12-91 Easy Setup Ride Height Gauge
- ☐ 12-93 Body Template

HARDWARE

M3 Button Head Screws (BH)

- ☐ M3x6 BH (2)
- ☐ M3x8 BH (13)
- ☐ M3x10 BH (12)
- ☐ M3x12 BH (4)
- ☐ M3x16 BH (5)
- ☐ M3x20 BH (2)
- ☐ M3x25 BH (6)
- ☐ M3x30 BH (2)

M3 Flat Head Screws (FH)

- ☐ M3x10 FH (6)
- ☐ M3x12 FH (6)
- ☐ M3x16 FH (4)
- ☐ M3x20 FH (2)
- ☐ M3x25 FH (1)
- ☐ M3x30 FH (2)

M3 Cap Head Screws (CH)

- ☐ M3x10 RCH (6)

M3 Set Screws (SS)

- ☐ M3x10 SS (6)

M3 Washers, Nuts & Other

- ☐ M3 NyLoc (18)
- ☐ M3 FW (4)
- ☐ M3x0.5 FW (2)
- ☐ M3x5.5x7 TB (11)
- ☐ M3x5.5 BT (4)
- ☐ M3x12 FW (1)

M4 Flat Head Screws

- ☐ M4x12 FH (4)

Bearings & More

- ☐ FMB 6x10x3 FB (2)
- ☐ FMB 3/16 x 5/16 x 1/8 (4)
- ☐ SP 3x25 (5)
- ☐ SB 3x5x5 (10)
- ☐ ZR-0 Rubber Band (6)
- ☐ Small Zip-Tie (2)
- ☐ Body Clips (4)

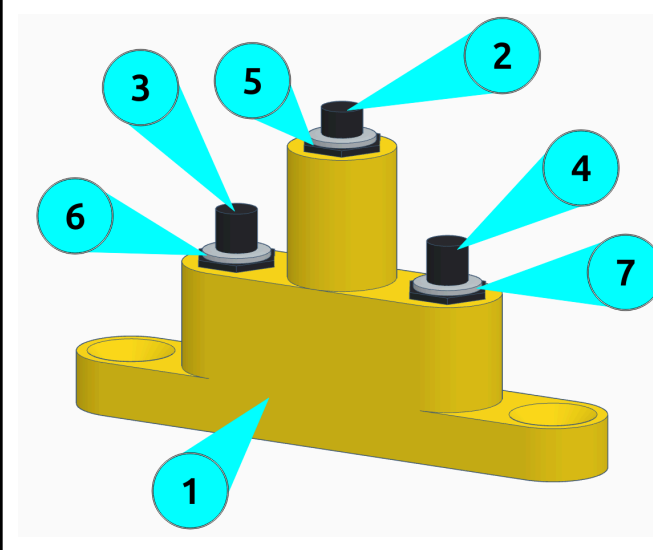
HARDWARE KEY

TB = Threaded Ball
BT = Ball Tube
BH = Button Head Screw
FH = Flat Head Screw
CH = Cap Head Screw
RCH = Reduced Size Cap Head Screw
FW = Flat Washer
NyLoc = Nylon Locking Hex Nut
FMB = Flanged Metal Bearing
SP = Steal Pin
SB = Sleeve Bearing
RB = Rubber Band
SS = Set Screw
ZT = Zip-Tie
BC = Body Clip

DAMPER MOUNT

Hardware for this section:

- FH M3x16 (2) - damper mount outer posts
- FH M3x25 (1) - damper mount center post
- M3 NyLoc (3) - damper mount all 3 posts

Damper Mount	
PARTS	1. Damper Mount 2. M3 x 25 FH 3. M3 x 16 FH 4. M3 x 16 FH 5. M3 NyLoc 6. M3 NyLoc 7. M3 NyLoc
Assembly STEPS	
1	Assemble as shown

POD

Hardware for this section:

BH M3x10 (2) - motor plate

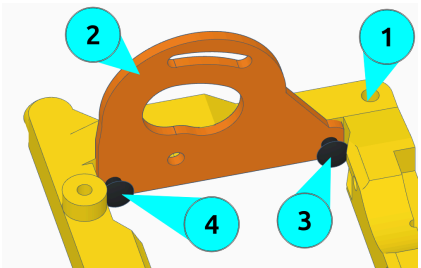
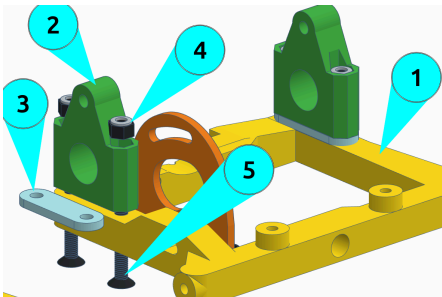
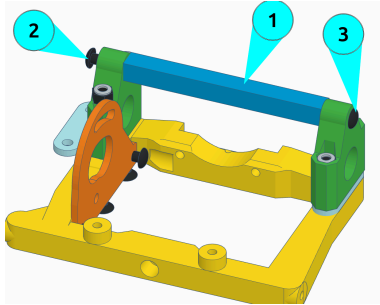
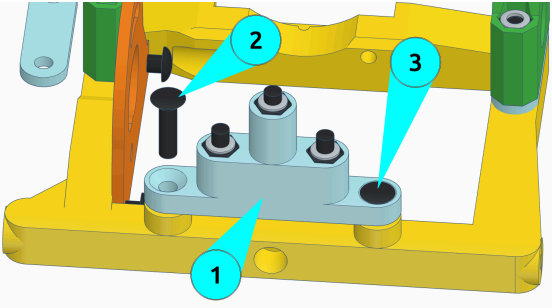
FMB 6x10x3 (2) - flanged bearing... insert an axle bearing into each rear carrier

FH M3x25 (4) - carriers to pod

M3 NyLock (4) - carriers top

BH M3x16 (2) - top brace to carriers (barely snug)

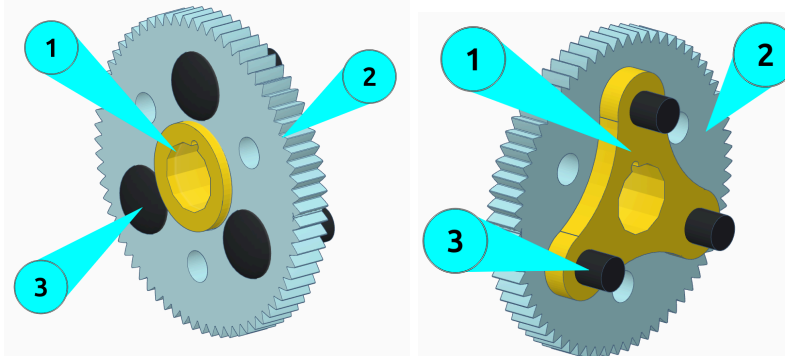
FH M3x10 (2) - damper mount to pod

STEP 1 1. Pod 2. Motor Plate 3. M3x10 BH 4. M3x10 BH Attach motor plate to pod as shown	
STEP 2 1. Pod 2. Carrier (2) 3. Rear Ride Height Shim (2) (use the 2 dot shim to start with) 4. M3 NyLoc (4) 5. M3x25 FH (4) Attach Carriers to pod as shown	
STEP 3 1. Top Brace 2. M3x12 BH 3. M3x12 BH Attach top brace to carriers as shown. Tighten screws to just snug, not tight.	
STEP 4 1. Assembled Damer Mount 2. M3x12 FH 3. M3x12 FH Attach the assembled damper mount to the pod as shown.	

SPUR DISK & SPUR GEAR ASSEMBLY

Hardware for this section:

BH M3x8 (3) - spur gear to spur disk



1. Spur Disk
2. Spur Gear
3. M3x8 BH (3)

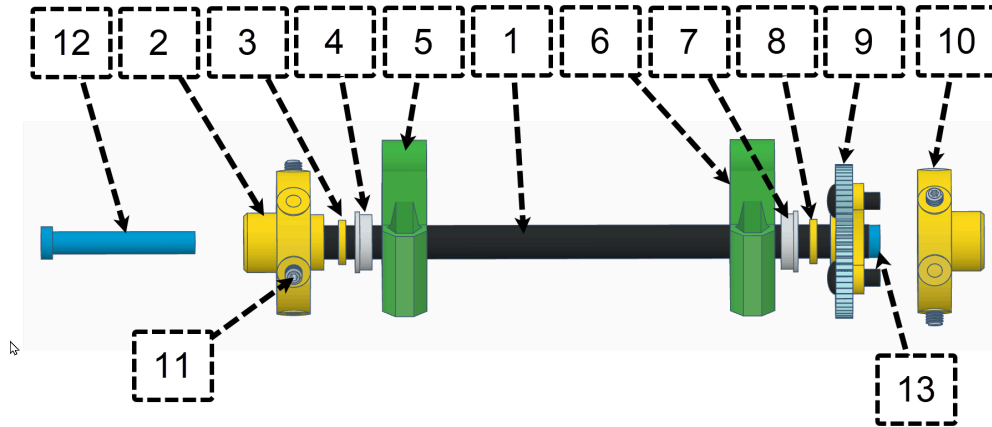
Assemble as shown.

REAR SPOOL ASSEMBLY into POD

Hardware for this section:

SS M3x10 (6) - rear hubs to axle (barely snug)

FMB 6x10x3 (2) - bearings to be inserted into carriers



1. Axle
2. Hub
3. Shim
4. Bearing - (should be inserted into carrier already attached to pod)
5. Carrier - (already attached to pod)
6. Carrier - (already attached to pod)
7. Bearing - (should be inserted into carrier already attached to pod)
8. Shim
9. Spur Disk with Spur Gear attached
10. Hub
11. M3x10 SS (6), 3 per hub (labeled only once above)
12. Rear Axle Plug
13. Rear Axle Plug

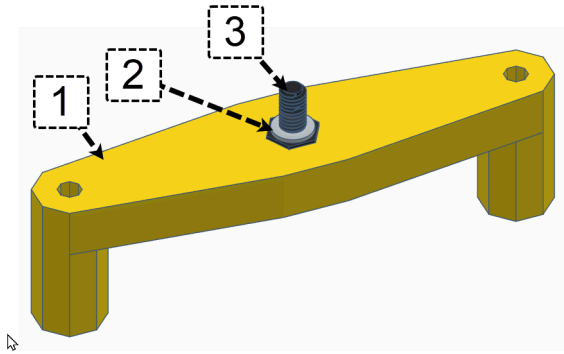
- Insert Axle Plug into each end of the axle
- Insert bearings (#4 & #7) into carriers (#5 & #6) on pod
- Insert a hub #2) onto the left end of the axle (#1), flush on left side as shown
- Screw in 3 M3x10 Set Screws (shown but not labeled above) into hub and snug each to axle.
- Add a 1mm shim (#3) to the axle
- insert axle from left side through bearing (#4) in left carrier and through bearing (#7) in the right carrier on POD
- Add a 1mm shim (#8) to axle
- Slide spur gear & disk assembly (#9) onto axle as shown
- Slide a hub on to the right end of the axle. Be sure screws in the spur disk assembly go into the larger holes in the hub.
- Do not push the right end real tight, leave just a fraction of a mm of end play for the axle to not bind on the bearings.
- Screw in 3 M3x10 Set Screws (shown but not labeled above) into hub and snug each to axle.

CENTER POST

Hardware for this section:

FH M3x10 (1) - center post to center link

M3 NyLoc (1) - center post



1. Center Post
2. M3 NyLoc
3. M3x10 FH

Assemble as shown.

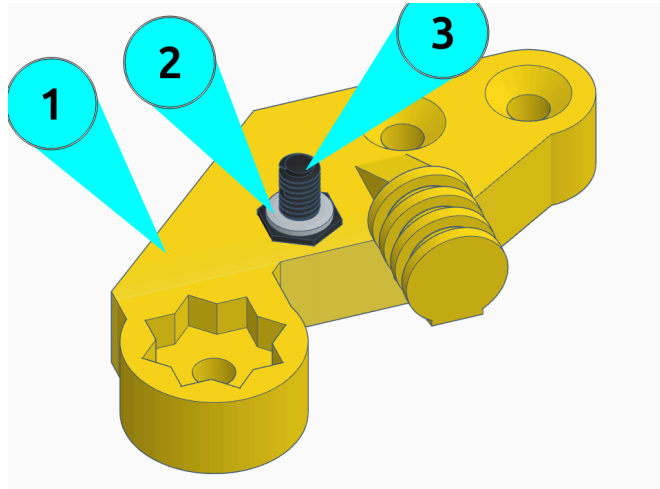
SIDE ARMS

Hardware for this section:

M3 NyLoc (2) - side arms

FH M3x10 (2) - side arms

FH M3x12 (4) - side arms to chassis



1. Side Arm (left shown)
2. M3 NyLoc (2) - 1 per side arm
3. M3x10 FH (2) - 1 per side arm

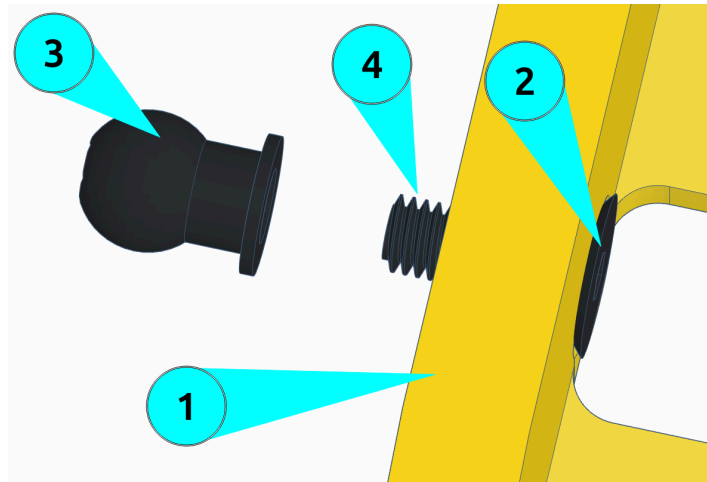
Assemble the left side arm as shown.
Repeat for right side arm (not shown)

CHASSIS PIVOT BALL

Hardware for this section:

FH M3x10 (1) - rear pivot ball (use a little blue locktite)

TB M3x5.5x7 (1) - rear pivot ball



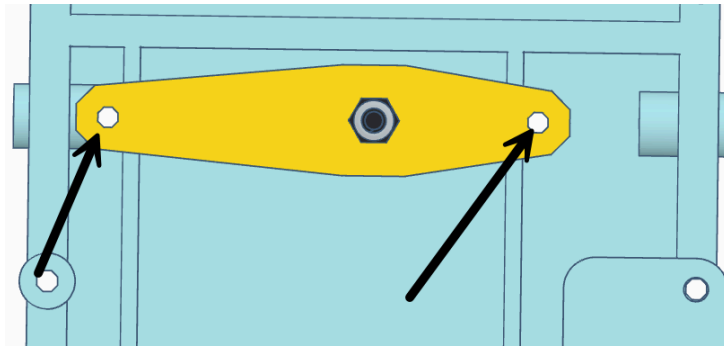
1. Chassis
2. M3x8 FH
3. M3x5.5x7 TB
4. Placement of blue thread lock paste

Assemble as shown

CENTER POST to CHASSIS

Hardware for this section:

FH M3x16 (2) - center post to chassis

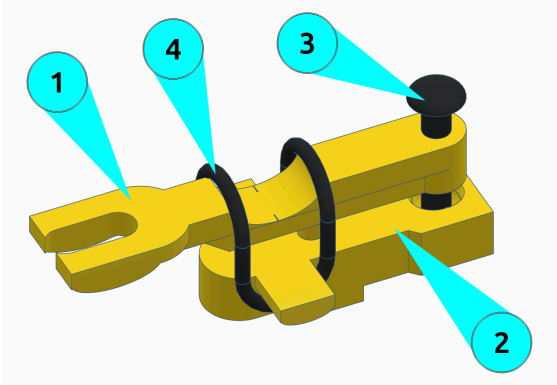


Attach center post assembly to chassis using 2 each M3x20 FH through the bottom of chassis up into center post assembly. Placement on chassis as shown above.

ROCKER & CRADLE

Hardware for this section:

BH M3x12 (2) - rockers (adjusters)

Rocker & Cradle	
PARTS	1. 112r2-214-1 Front Rocker 2. 112r2-214-2 Front Cradle 3. M3x12 BH 4. Suspension Band(s)
Assembly STEPS:	
1	Install M3x12 BH through rocker end, sets in pocket of cradle
2	Install Zer0-Ring(s) as seen in image (use 1 to 3 as needed for track tuning)
3	Repeat for second rocker assembly

FRONT HUBS

Hardware for this section:

SB 3x5x5 (4) - insert 2 per hub

M3 Nut - (2) - front hubs

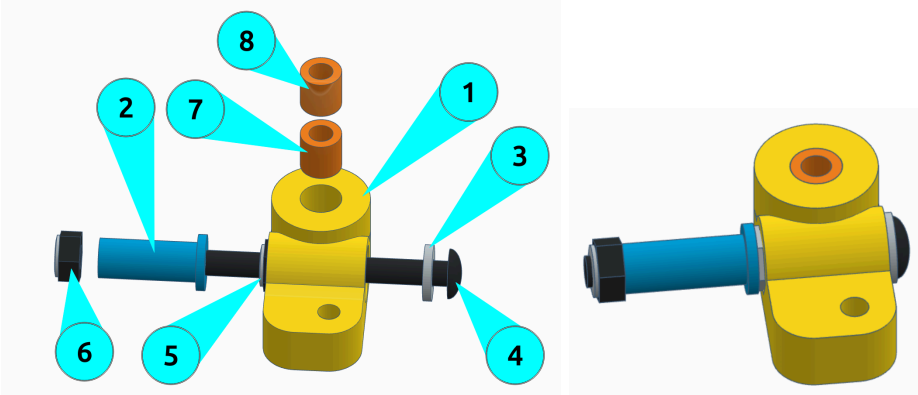
M3 FW (4) - 2 per axle on inside next to BH head (narrow front end)

BH M3x30 (2) - front axles

RB ZR-0 (6) - place the rockers into place and add 3 zero-rings to each rocker

FMB 3/16 x 5/16 x 1/4 (4) - 2 per axle

M3 NyLoc (2) - front wheel nut

Front Hub	
PARTS	1. Front Hub 2. Front Axle Adaptor 3. M3x0.5 FW (Use 2, only 1 shown in photo) 4. M3x30 BH (axle) 5. M3 Nut 6. M3 NyLoc 7. 3x5x5 SB 8. 3x5x5 SB
Assembly STEPS:	
1	Press the 2 3x5x5 SB (#7 & #8) into front hub (#1) from top until flush
2	Assemble items #4, #3, #3, #1, #5 and tighten, use 2 flat washers (#3) whereas only 1 is shown
3	Thumb thread front axle adaptor #2 onto axle
8	Repeat for right side

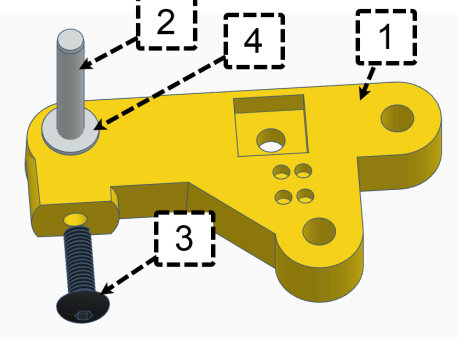
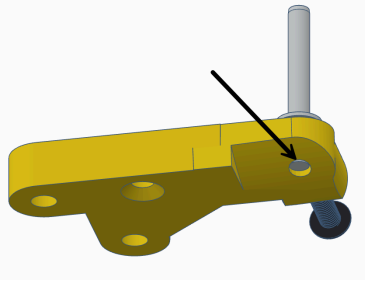
FRONT ARMS

Hardware for this section:

SP 3x25 (2) - king pins into front arms

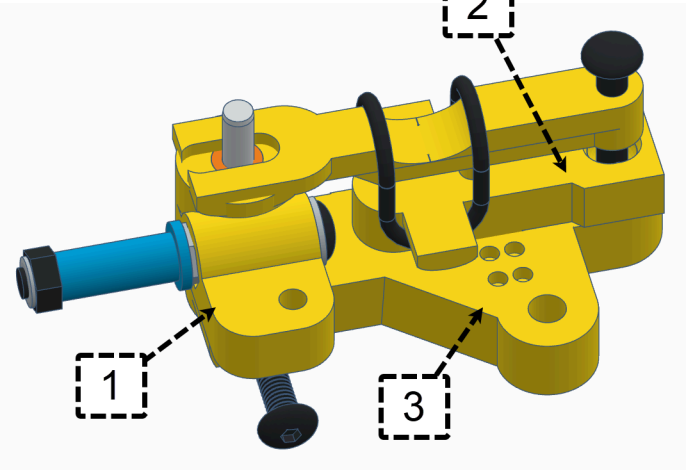
BH M3x8 (2) - front arm to hold kingpin (good'n tight)

M3x0.5 FW (2) - droop limit on kingpin

Front Arm & Kingpin	
PARTS	1. Front Arm 2. 3x25 SP (kingpin) 3. M3x8 BH to secure kingpin 4. M3x0.5 FW
Assembly STEPS:	
1	☐ Press Steel Pin (kingpin) into Arm until flush on bottom 
2	☐ Insert BH to secure kingpin
3	☐ Place a M3x0.5 FW (#4) onto king pin (shiniest and smoothest side up) ☐ More FWs may be added later for more droop limit if desired. Recommend starting with one FW per arm.

FRONT ASSEMBLY (Arm, Hub, Rocker & Cradle)

Hardware for this section:
FH M3x12 (2) - cradle to arms

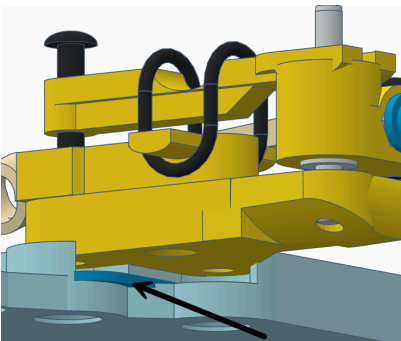
Front Arm, Rocker, and Hub	
PARTS	1. Hub Assembly 2. Cradle & Rocker Assembly 3. Front Arm Assembly
Assembly STEPS:	
1	Add grease to kingpin
2	Slide hub onto kingpin (take note of left and right hubs)
3	Insert cradle with rocker assembly into top of arm assembly
4	Fasten using a Flat Head screw (not shown) from bottom side up through arm into cradle
5	Repeat for right side

FRONT ARM ASSEMBLY to CHASSIS

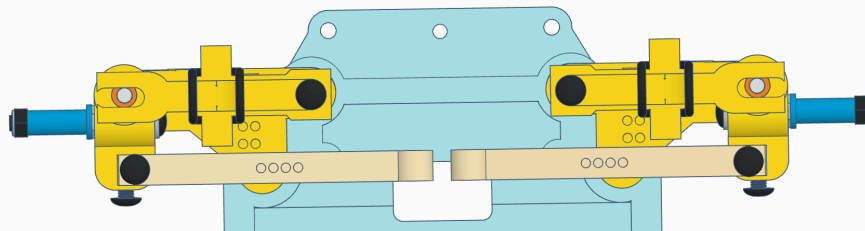
Hardware for this section:

FH M4x12 (4) - arms to chassis

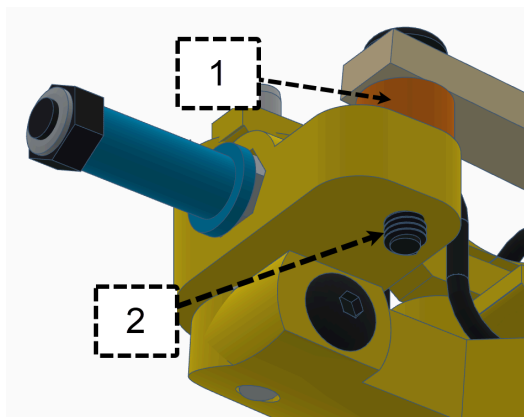
BH M3x16 (2) - toe links to hubs



Front Ride Height Shim Placement, start with the 2 Dot shim.



Attach front arms to chassis using M4x12 FH screws, 2 per arm, from bottom of chassis



Attach toe links to hubs using M3x16 BH screw as shown with the Bump Shim (#1) between the Toe Link and the Hub. Do NOT tighten, bottom of the screw should protrude 2mm below the bottom of the hub (#2).

SERVO SAVER

Hardware for this section:

BH M3x8 (2)

BH M3x12 (1)

TB M3x5.5x7 (2)

- 1) Servo Saver
- 2) BH M3x6 (2)
- 3) TB M3x5.5x7 (2)

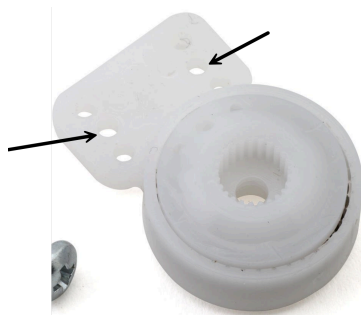
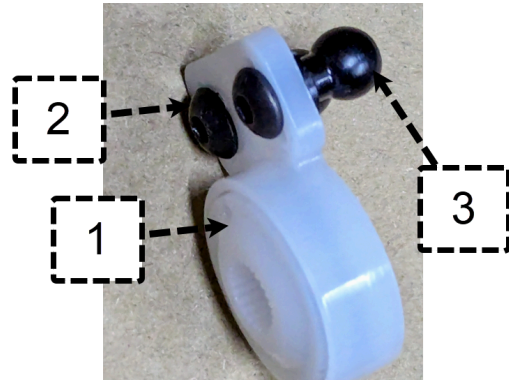


IMAGE #2

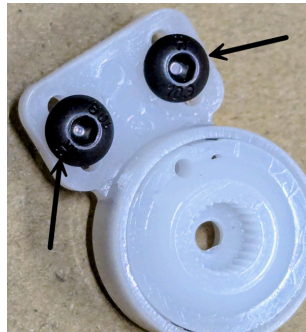


IMAGE #3



IMAGE #4

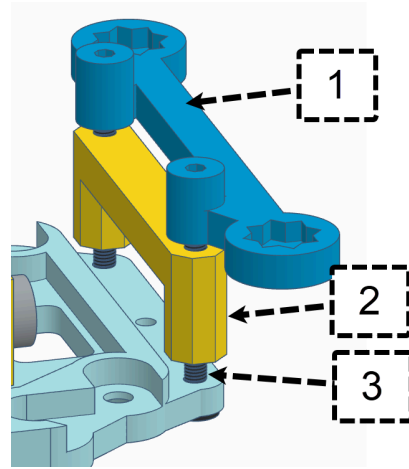
1. Drill the center (closer together) pair of holes using a 7/64 drill bit (image #2)
2. Thread M3x6 BH (2) into drilled holes as shown (image #3)
3. Thread M3x5.5x7 Threaded Ball onto each of the M3 screws and tighten (image #4)

FRONT BODY POST MOUNT

Hardware for this section:

M3x30 FH (2)

1. Front Body Post Mount
2. Front Body Post Riser
3. M3x30 FH (2)



FH M3x35 (2) - through chassis, through front body post riser, into front body post mount
NEED IMAGES

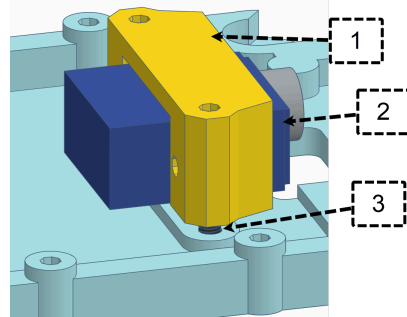
SERVO, SERVO KEEPER

Hardware for this section:

FH M3x16 (2) - through chassis, into servo keeper

BH M3x12 (1) - servo saver to servo

1. Servo Keeper
2. Servo
3. M3x16 FH (2)

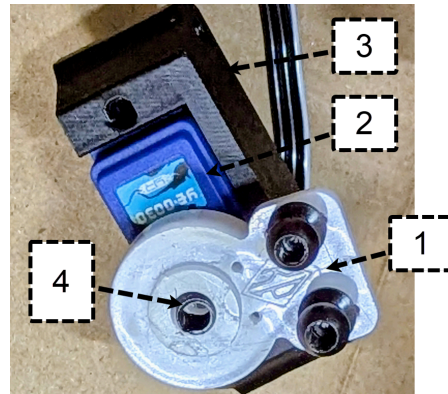


STEPS:

1. REMOVE THE WRAP-AROUND LABEL FROM SERVO
2. Slid the servo into the servo keeper as shown
3. Attach servo keeper with servo to the chassis using 2 each M3x16 FH screws through the bottom of the chassis and up into the servo keeper.

SERVO SAVER TO SERVO

1. Servo Saver Assembled
2. Servo
3. Servo Keeper
4. Servo Bushing
5. M3x10 BH (not shown) holds servo saver onto the servo



STEPS:

1. Center the servo using your radio with EPA = 100 and SUB-TRIM = 0 (centered)
2. Install servo saver onto the servo as shown, getting it as close to the center position as possible.
3. Secure the servo horn to the servo using a M3x10 BH screw.
4. Use Sub-Trim feature on radio to get servo horn perfectly centered

SIDE LINKS

Hardware for this section:

BT M3x5.5x7 (4)

BH M3x25 (2)

BH M3x16 (2)

RB ZR-0 (6)

BT M3x5.5x7 (4) - ball tube, 2 per side link

BH M3x25 (2) - side links (rear) - through lower spindle, through side link BT end, into POD

BH M3x16 (2) - side links (front) - through side link BT end into CHASSIS

Install Center Link from chassis to pod

RB ZR-0 (6) - install 3 zero-rings per side from lower spindle to upper spindle on side arm

CENTER LINK

Hardware for this section:

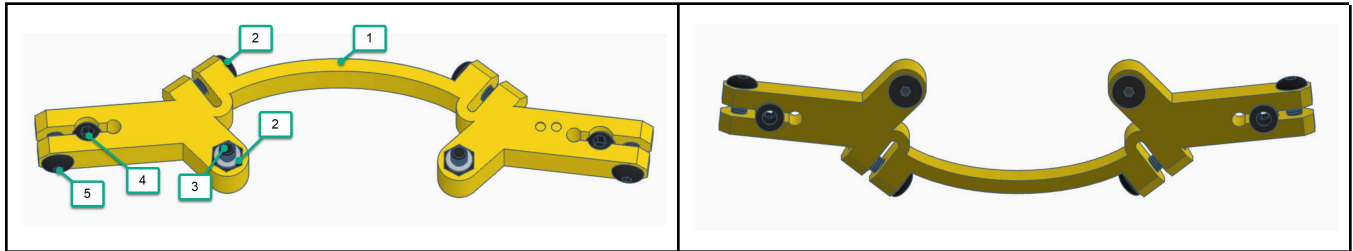
BH M3x10 (2)

M3 NyLoc (2)

FH M3x10 (2)

TB M3x5.5x7 (2)

BH M3x8 (2)



1. Center Link
2. BH M3x10 (2) - center link droop adjuster (do NOT tighten)
3. M3 NyLoc (2) - damper post
4. FH M3x10 (2) - damper post
5. TB M3x5.5x7 (2) - pivot ball ends
6. BH M3x8 (2) - pivot ball tension (do NOT tighten, just take slack out of the ball movement)
7. REPEAT 2-5 on other end

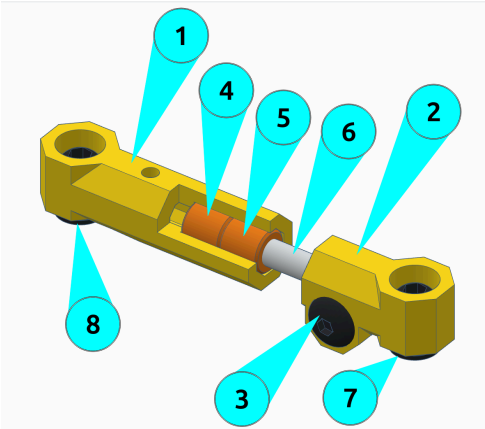
DAMPERS (3)

Hardware for this section:

TB 3x5.5x7 (6)

SP 3x25 (3)

BH M3x8 (3)

Damper	 The diagram shows an exploded view of a damper assembly. It consists of two yellow metal blocks (1 and 2) that will be joined. Between them are two orange cylindrical spacers (4 and 5). A silver plunger (2) is shown inserted into one of the blocks. A black O-ring (3) is shown being placed around the plunger. A black screw (3) is shown being inserted into the side of the block to secure the O-ring. A black tube (7) is shown being inserted into the plunger. A black tube (8) is shown being inserted into the other block. A black screw (6) is shown being inserted into the plunger from the side.
PARTS	1. Cannon 2. Plunger 3. M3x8 BH 4. M3x5x5 SB 5. M3x5x5 SB 6. M3x25 SP 7. M3x5.5x7 TB 8. M3x5.5x7 TB
Assembly STEPS	
1	Press SP (#6) into Plunger (#2) - 16-17mm should protrude when fully inserted
2	Thread BH (#3) from side as shown to secure SP. (MUST BE THE SIDE AS SHOWN)
3	Press 2 SB (#4 & #5) into Cannon (#1) to flush as shown
4	Press a TB (#7) into Plunger (#2) as shown
5	Press a TB (#8) into Cannon (#1) as shown
6	Partially fill cavity inside Cannon (#1) with 15k grease as damping
7	Slide the two halves together. Wipe away any excess grease.
8	Adjust amount of grease as needed to perform without popping, slack, or seal locking
9	Repeat steps 1-8 for second damper

BODY POSTS

Hardware for this section:

BH M3x10 (2) - front (short) body posts (install so body clip holes are front -to-back)

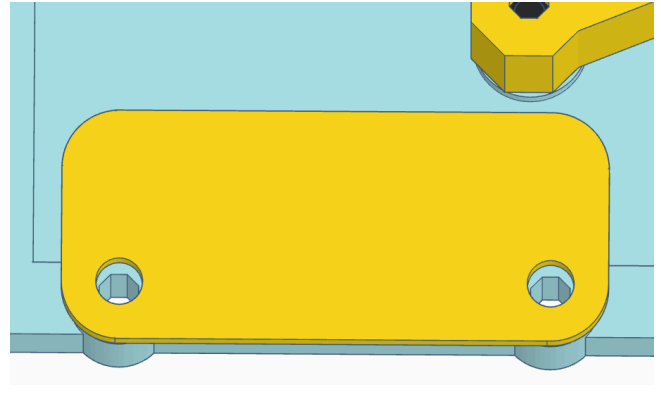
BH M3x10 (2) - rear (long) body posts (install so body clip holes are front -to-back)

FRONT WIRE KEEPER

Hardware for this section:

- 1) BH M3x8 (2) - front wire keeper to chassis

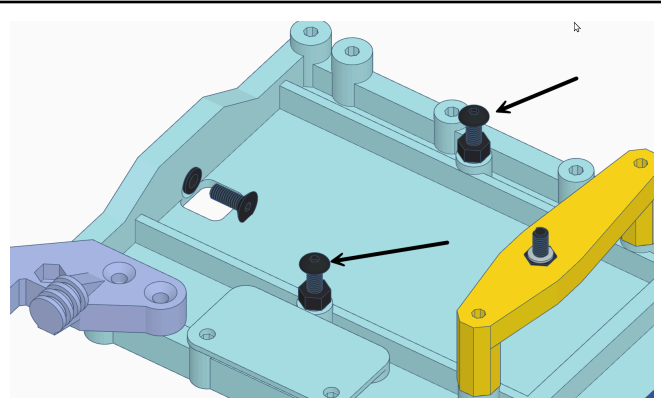
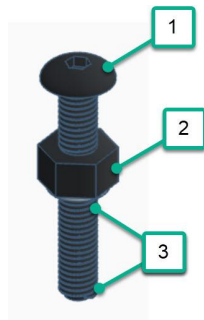
1. Use the M3x8 (2) screws (not shown) to fasten the Front Wire Keeper to the chassis after neatly wrapping/folding the excess servo wire under the keeper.



BATTERY BAND POSTS

Hardware for this section:

- BH M3x20 (2)
M3 NyLoc (2)



1. BH M3x20 (2) - battery band post
2. M3 NyLoc (2) - battery band post screw limiter
3. GAP = 8mm or adjust as preferred

MOTOR MOUNTING

- BH M3x8 - motor upper hole
FW M3 - motor upper hole
BH M3x16 - motor lower hole
FW M3x12 - motor lower hole

REAR WHEEL MOUNTING

- RCH M3x10 (6) - use 3 per side reduced size cap head screws to mount rear wheels

OTHER INFO

RECOMMENDED PARTS

- Yeah Racing YE-0030 Micro Servo
- Kyosho #96504 15k Diff. Gear Grease

TUNING OPTIONS & MORE

- 12-41 Center Link (soft)
- 12-42 Center Link (medium, included in kit)
- 12-43 Center Link (hard)

REQUIRED FOR COMPLETION: (not included)

- Battery
- Motor
- Front Tires
- Rear Tires
- Body - BittyDesign ARES-1 (GT12 Body by Bitty Designs)
- Pinion Gear
- Radio System
- ESC