

2020

# Grade Carbon

Owner's Manual Supplement



## WARNING

**READ THIS SUPPLEMENT AND YOUR GT BICYCLE OWNER'S MANUAL.** Both contain important safety information. Keep both for future reference.

**GT**  
BICYCLES

## Safety Messages

In this supplement, particularly important information is presented in the following ways:






### WARNING

Indicates a hazardous situation which, if not avoided, may result in death or serious injury.

### NOTICE

Indicates special precautions that must be taken to avoid damage.

The following symbols are used in this manual:

Symbol	Name	Description
	NGLI-2 synthetic grease	Apply NGLI-2 synthetic grease.
	Carbon gel	Apply carbon gel (friction paste) KF115/
	Medium-strength removable thread lock	Apply Loctite® 242 (blue) or equivalent.

## GT Supplements

This manual is a “supplement” to your [GT Bicycle Owner’s Manual](#).

This supplement provides additional and important model specific safety, maintenance, and technical information. It may be one of several important manuals/supplements for your bike; obtain and read all of them.

Please contact your Authorized GT Dealer immediately if you need a manual or supplement, or have a question about your bike. You may also contact us using the appropriate country/region/location information.

You can download Adobe Acrobat PDF versions of any manual/supplement from our website:  
[www.gt bicycles.com](http://www.gt bicycles.com)

## Contacting GT

### GT USA

Cycling Sports Group, Inc.  
1 Cannondale Way,  
Wilton CT, 06897, USA  
1-800-726-BIKE (2453)

### Cycling Sports Group Europe B.V

Mail: Postbus 5100  
Visits: Hanzepoort 27  
7575 DB, Oldenzaal, Netherlands

### International Distributors

Consult the following website to identify the appropriate GT Dealer for your region.

[www.gt bicycles.com/usa\\_en/international-distributors/](http://www.gt bicycles.com/usa_en/international-distributors/)

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## Your GT Dealer

To make sure your bike is serviced and maintained correctly, and that you protect applicable warranties, please coordinate all service and maintenance through your Authorized GT Dealer.

### NOTICE

Unauthorized service, maintenance, or repair parts can result in serious damage and void your warranty.

## SAFETY INFORMATION

### Important Composites Message

#### WARNING

Your bike (frame and components) is made from composite materials also known as “carbon fiber.”

All riders must understand a fundamental reality of composites. Composite materials constructed of carbon fibers are strong and light, but when crashed or overloaded, carbon fibers do not bend, they break.

For your safety, as you own and use the bike, you must follow proper service, maintenance, and inspection of all the composites (frame, stem, fork, handlebar, seat post, etc.) Ask your GT Dealer for help.

We urge you to read PART II, Section D. “Inspect For Safety” in your [GT Bicycle Owner's Manual](#) BEFORE you ride.

You can be severely injured, paralyzed or killed in an accident if you ignore this warning.

### Inspection & Crash Damage Of Carbon Frames/Forks

#### WARNING

After A Crash Or Impact:

Inspect frame carefully for damage (See PART II, Section D. Inspect For Safety in your [GT Bicycle Owner's Manual](#).)

Do not ride your bike if you see any sign of damage, such as broken, splintered, or delaminated carbon fiber.

Any of the following may indicate a delamination or damage:

- An unusual or strange feel to the frame
- Carbon which has a soft feel or altered shape
- Creaking or other unexplained noises,
- Visible cracks, a white or milky color present in carbon fiber section

Continuing to ride a damaged frame increases the chances of frame failure, with the possibility of injury or death of the rider.

## Intended Use



The intended use of all models is ASTM CONDITION 2, General Purpose Riding.

### **WARNING**

Please read your GT Bicycle Owner's Manual for more information about Intended Use and Conditions 1-5.

## Servicing

### **WARNING**

This supplement may include procedures beyond the scope of general mechanical aptitude.

Special tools, skills, and knowledge may be required. Improper mechanical work increases the risk of an accident. Any bicycle accident has risk of serious injury, paralysis or death.

To minimize risk we strongly recommend that owners always have mechanical work done by an Authorized GT Dealer.

## Disc Brakes on Road Bikes

### **WARNING**

Relative to conventional rim brakes, disc brakes are less affected by water, do not wear or heat the rims and therefore are more consistent. Disc brakes also may be more powerful.

To minimize risk of injury or accidents:

- Understand that road bikes have a relatively small tire contact patch (part of the tire that touches the road). In order to apply the brakes safely and effectively, you may need more or less braking force in different situations. You need to take into account various road and weather conditions that can affect traction.
- Disc brakes are excellent, but not some kind of magic. Take some time riding your new disc brake road bike in lower risk circumstances to get used to the feel and performance of the disc brakes and tires.

**You can be severely injured, paralyzed or killed in an accident if you ignore this message.**

## Trainers

If you ride a trainer that requires removal of the front wheel and clamps the fork dropouts: Be sure your fork quick release is tight! Relative movement will wear parts, weaken and damage your bike.

If you ride a trainer that holds the bike up by clamping the rear quick release between two cones: Take off the lightweight quick release that came with your bike. Substitute a heavy, classic all steel quick release and clamp it tight! Relative movement will wear parts, weaken and damage your bike. Note that many modern quick releases will not fit the clamping cones in this kind of trainer because their shapes are incompatible.

For thru axles, make sure you follow the trainer manufacturer instructions for the use of any required adapters.

Be particularly cautious with a carbon frame or fork. Carbon is relatively soft, not abrasion resistant. If there is any relative movement, carbon will wear quickly.

If you ride a trainer a lot, consider using an old bike: Corrosion from sweat will take its toll. Weight is irrelevant. Save wear on your expensive components.

Ask your dealer for help with trainers, the right one and the correct way to use it.

### NOTICE

**TRAINERS** - Improperly mounting a bike in a trainer, or using one that is not compatible with your particular bike frame can cause serious damage.

**WATER BOTTLES** - An impact, crash, or loose bottle cage can result in damage to your frame.

This kind of damage is not covered by the GT Limited Warranty.

## Water Bottles

Side impacts to a water bottle or cage can result in damage to threaded inserts due to the leverage on a very small area. In a crash, certainly the last thing you should be worried about is saving the threaded inserts in your frame. However, when you are storing or transporting your bike, take steps to prevent situations where a water bottle may be hit or bumped by a strong force that would cause damage. Remove bottle and cage when you are packing your bike for travel.

Periodically check the attachment of the bottle cage; tighten the cage bolts if necessary. Don't ride with a loose bottle cage. Riding with loose cage bolts can produce a rocking motion or vibration of the attached cage. A loose cage will damage the insert and possibly lead to the inserts to pull out.

It may be possible to repair a loose insert, or install another insert only if the frame is undamaged. Replacement requires the use of a special tool. If you notice damage to the threaded insert, please ask your GT Dealer for help.

## Building Up A Frame Set

Before building up a frame set, consult with your GT Dealer and the component manufacturers, and discuss your riding style, ability, weight, and interest in and patience for maintenance.

Make sure the components chosen are compatible with your bike and intended for your weight and riding style.

Generally speaking, lighter weight components have shorter lives. In selecting lightweight components, you are making a trade-off, favoring the higher performance that comes with less weight over longevity. If you choose more lightweight components, you must inspect them more frequently. If you are a heavier rider or have a rough, abusive or "go for it" riding style, buy heavy duty components.

Read and follow the component manufacturers warnings and instructions.

## Tightening Torques

Correct tightening torque for the fasteners (bolts, screws, nuts) on your bicycle is very important to your safety. Correct tightening torque for the fasteners is also important for the durability and performance of your bicycle. We urge you to have your dealer correctly torque all fasteners using a torque wrench. If you decide to torque fasteners yourself always use a torque wrench.

Find Tightening Torque Information :

The wide range of bicycle models and components used means that a listing of tightening torque would be out of date by the time it was published. Many fasteners should be installed with a thread locking adhesive such as Loctite®.

To determine correct tightening torque and any adhesive application for a fastener we ask you to check:

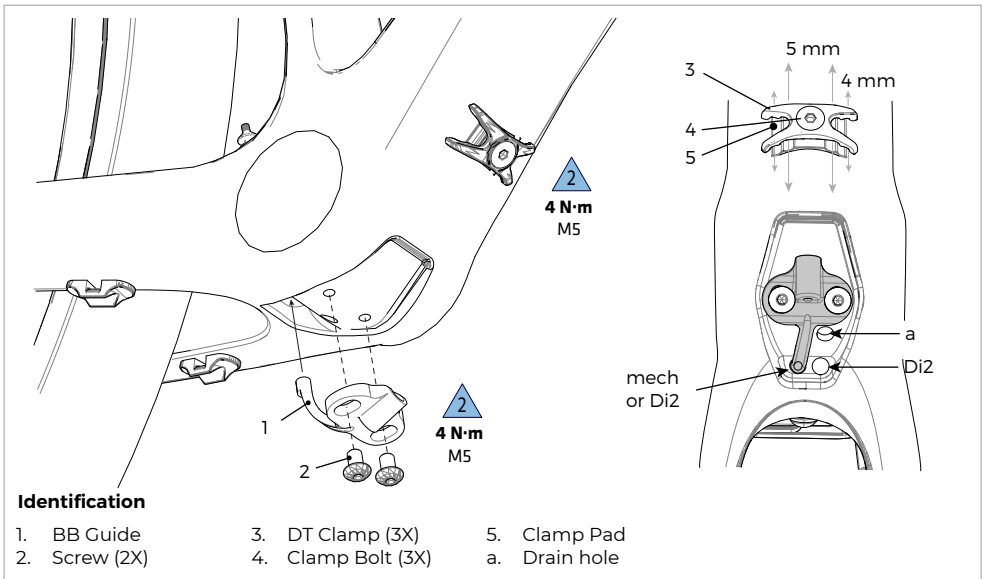
- Many components are marked. On-product marking is becoming common.
- Torque specs in the component manufacturers instructions shipped with your bicycle.
- Torque specs listed on the websites of component manufacturers.
- With your dealer. Dealers have access to current data and have experience with correct torque for most fasteners.

## TECHNICAL INFORMATION

### Frame Specification

Item	Specification
Head Tube	UPR: 1-1/8 in, LWR: 1-1/4 in
Headset	FSA No.44E, UPR: 1-1/8 in, LWR: 1-1/4 in
Bottom Bracket: Type / Width	PF30 (sleeved) / 68 mm
Front Derailleur	Brazed-on
Seat Post: Dia./Binder	27.2 mm / 31.8 mm
▲ Min. Seat Post Insert	65 mm
▲ Max. Seat Post Insert	See page 15.
▲ Tire Size x Max. Width	700c x 40 mm (measured)
Brakes: Mount Type / Min/Max Rotor Dia.	RR: Flat Mount / 160 mm / 180 mm Only, FR: Flat Mount / 160 mm / 180 mm Only
Axles: Type/Length	FR: Maxle TA / 100 x 12 mm RR: Syntace TA / 142 x 12 mm, M12x1, Single Lead
▲ Intended Use:	ASTM Condition 2, General Purpose Riding
▲ Max. Weight Limit: Total	285 lbs / 129 kg (rider + all equipment)

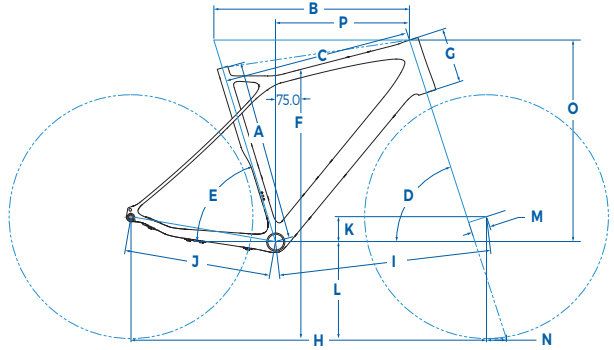
### Bottom Bracket Cable Guide





# Geometry

- A Seat Tube Length
- B Top Tube Horizontal
- C Top Tube Actual
- D Head Tube Angle
- E Seat Tube Angle (effective)
- E' Seat Tube Angle (actual)
- F Standover
- G Head Tube Length
- H Wheelbase
- I Front Center
- J Chain Stay Length
- K Bottom Bracket Drop
- L Bottom Bracket Height
- M Fork Rake
- N Trail
- O Stack
- P Reach



Dimensions = centimeter/inches

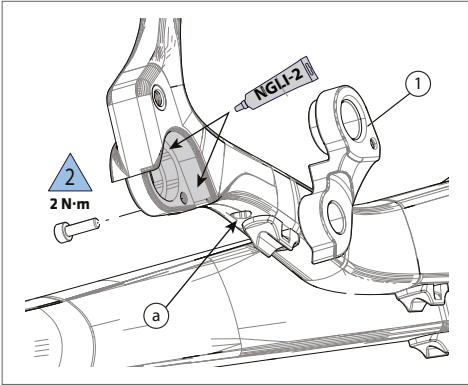
Size	48	51	55	58	62
A	45.7/18.0	49.4/19.4	53.1/20.9	56.8/22.4	60.5/23.8
B	54.5/21.5	55.9/22.0	57.4/22.6	58.7/23.1	60.2/23.7
C	52.3/20.6	53.8/21.2	55.5/21.9	57.1/22.5	58.8/23.1
D	70.5°	*	72.0°	72.3°	*
E	73.0°	*	*	*	*
E'	73.0°	*	*	*	*
F	72.2/28.4	75.7/29.8	78.9/31.1	82.5/32.5	85.7/33.7
G	11.9/4.7	14.5/5.7	16.2/6.4	18.7/7.4	21.0/8.3
H	102.7/40.4	104.3/41.1	104.3/41.1	105.5/41.5	107.0/42.1
I	60.8/23.9	62.3/24.5	62.4/24.6	63.4/25.0	65.0/25.6
J	43.0/16.9	*	*	*	*
K	7.5/3.0	7.3/2.9	*	7.0/2.8	*
L	28.3/11.1	28.5/11.2	*	28.8/11.3	28.7/11.3
M**	5.5/2.2	*	*	*	*
N**	6.8/2.7	*	5.8/2.3	5.6/2.2	5.6/2.2
O	54.7/21.5	56.9/22.4	59.1/23.3	61.3/24.2	63.5/25.0
P	37.8/14.9	38.5/15.2	39.3/15.5	39.9/15.7	40.8/16.1

\* Indicates same.

\*\* Flip Chip UN-LOADED shown, Flipping to "LOADED" position increases rake by 1.5 cm & decreases trail by 1.5 cm. See page 10.

All Specifications subject to change without notice.

## Rear Derailleur Mount



- 1. RD Mount
- 2. Screw
- a. Di2 cable exit

### To replace:

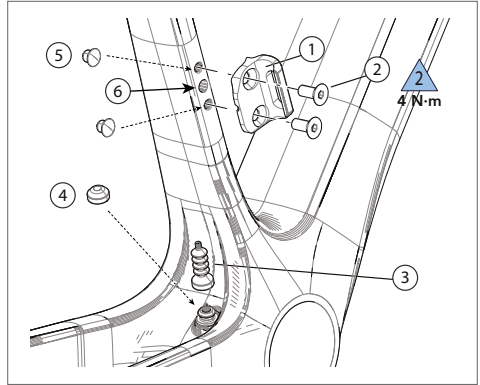
Remove the rear axle.

Remove the mounting screw(s) and remove the old hanger from the dropout. Clean the area around the dropout and inspect the frame carefully for any cracks or damage. If you find damage have the frame inspected by your GT Dealer .

If the dropout is un-damaged, apply a light film of grease between the frame and mount. This will help minimize any noise or "creaking" that might result from very slight movement between the dropout and hanger during movement of the derailleur.

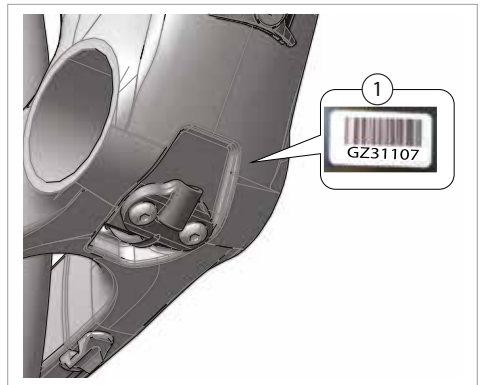
Slide the new hanger onto the dropout. Apply Loctite® 242 (or medium strength thread lock) to the screw threads and tighten to the specified torque.

## Front Derailleur Mount



- 1. FD Mount
- 2. Screws (2X)
- 3. FD Cable Boot
- 4. Di2 Cap
- 5. Plugs for 1x (single chain ring)
- 6. Di2 FD Cable Port

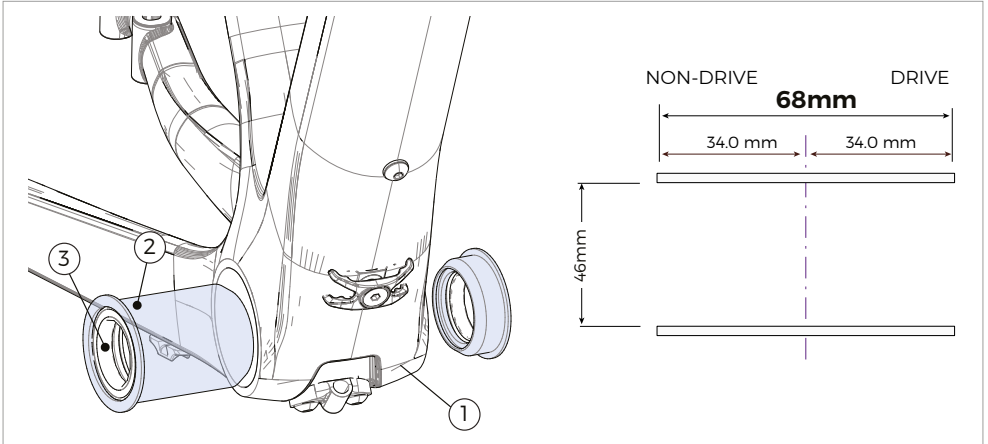
## Serial Number



The serial number is located on the bottom bracket. It is a 7-character barcode (1). Use this serial number to register your bike.

To register your bike: go to the Product Registration section of our website at:  
[www.gt bicycles.com](http://www.gt bicycles.com)

## Bottom Bracket - 68mm (PressFit)



### Maintenance

In general, you should inspect the condition of the bearings annually (at a minimum) or anytime the crankset assembly is disassembled, serviced, or if a problem is indicated.

To inspect, when the crankset is removed, rotate the inner bearing race of both bearings; rotation should be smooth, and quiet. Excessive play, roughness or corrosion indicates a damaged bearing.

### Removal

To avoid serious damage to the frame, it is important to remove bearing systems very carefully using proper tools indicated by the manufacturer's service instructions. Make sure the bearings(2) (cup or adapter parts) are driven out squarely and evenly from inside the shell! Do not pry components from shell.

### Replacement

PressFit 68mm(3) bearings are not removable from the adapters or cup systems that are pressed into the frame bottom bracket shell. Therefore, damaged bearings must be removed and replaced as new entire sets. Before installing any new bearing units into the shell, thoroughly clean the inside surface of the bottom bracket shell with a clean dry shop towel. Also, make sure both bearing units and the BB(1) shell surfaces are clean and dry. Do not apply grease to either.

Follow the manufacturer's instruction for assembly and installation of the bearing system. Use a headset press such as Park Tool HHP-2. See [www.parktool.com/product/bearing-cup-press-HHP-2](http://www.parktool.com/product/bearing-cup-press-HHP-2). Select appropriate press and adapters to ensure that force is only applied to the cup and not the bearing inside. Press until both cup flanges are mated to the BB shell edge.

### NOTICE

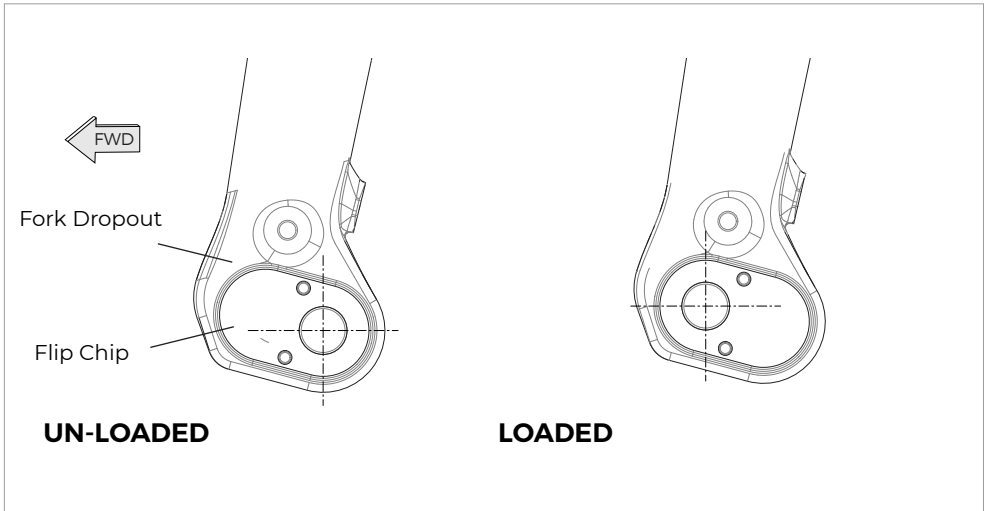
Consult with your GT Dealer on the quality and compatibility of any proposed replacement component.

- Make sure the PressFit 68mm system is intended for use with a 46 mm I.D. BB shell. Confirm actual part dimensions with a micrometer.
- Only use a BB bearing assembly with a sleeve (FSA, SRAM, etc.).
- Do not over-tighten PF30 cup assembly, doing so can result in damaging frame structure.
- Do not use chemical solvents to clean. Do not remove frame material or use surfacing tools on bottom bracket shell.

Frame damage, caused by improper components, component installation or removal is not covered by the limited warranty.

## Fork - Flip Chip

The fork flip chip orientation can be changed to move the front wheel axle forward (LOADED) or rearward (UN-LOADED). The default orientation is UN-LOADED, riding without a front load. The LOADED position is for riding with a front load, an axle position which increases fork rake 1.5 cm to decrease trail 1.5 cm. This forward axle improves steering response when carrying a load attached to the front end of the bicycle, for example, the fork or handlebar.



### **WARNING**

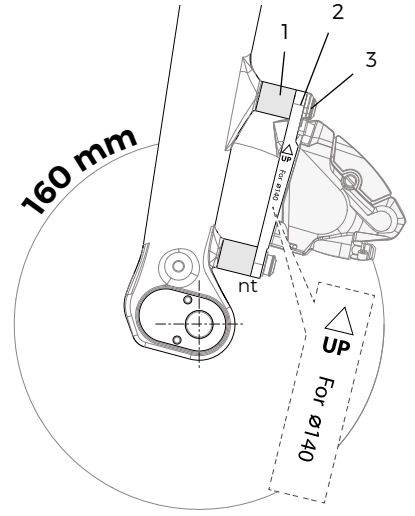
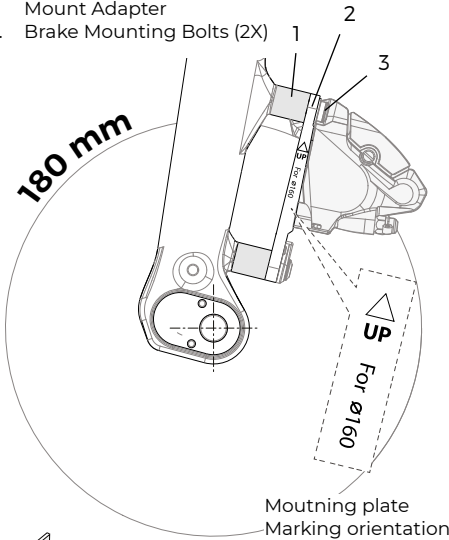
1. When changing the Flip Chips between LOADED and UNLOADED, the brake system components (Shimano Flat Mount Plate, Brake system parts, wheel disc) attachment must also be changed accordingly, see next figures.
2. Use only 160mm or 180mm brake disc. Do not use a 140mm brake disc.
3. Do not install any wheel into the fork, without the Flip Chips installed.

# Flip Chip - Brake System Set-Up

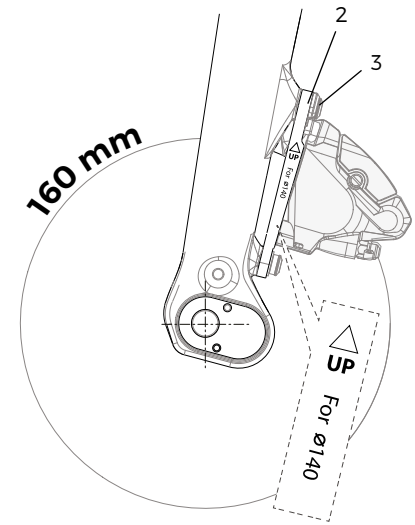
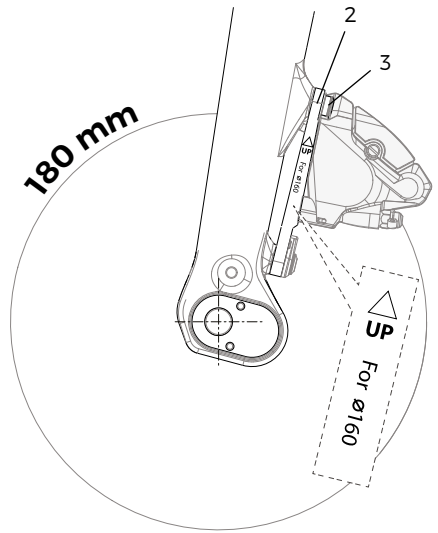
## Identification

1. Spacer (2X)
2. 140/160mm Front Flat Mount Adapter
3. Brake Mounting Bolts (2X)

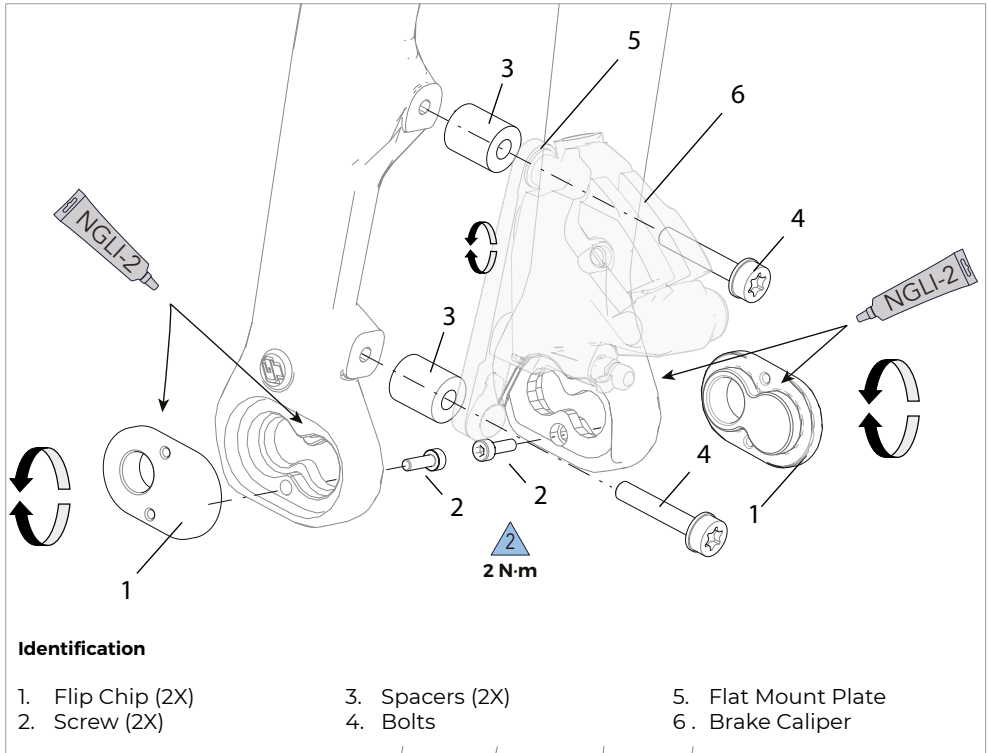
### UN-LOADED



### LOADED



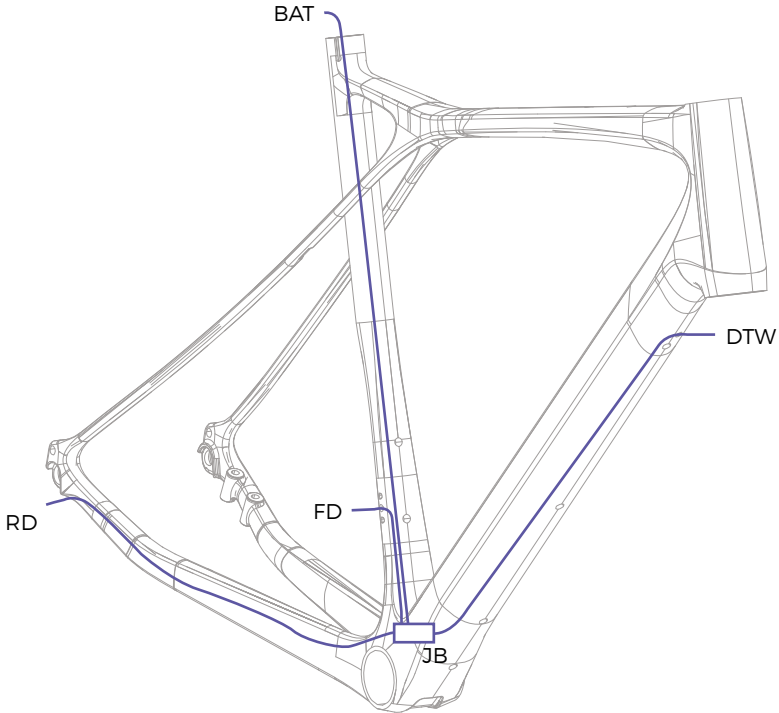
## Flip Chip - Parts



## Changing the Flip Chips

- Determine the UN-LOADED or LOADED Flip Chip position and changes needed in the flat mount brake plate and brake disc on previous page.
- Make sure both the flip chips and the fork socket are clean and free of contaminants.
- Lightly grease the socket and the flip chip and re-apply thread lock to the small screws before tightening with a torque wrench.
- Both flip chips must fit into the fork socket, Flat sides facing out.

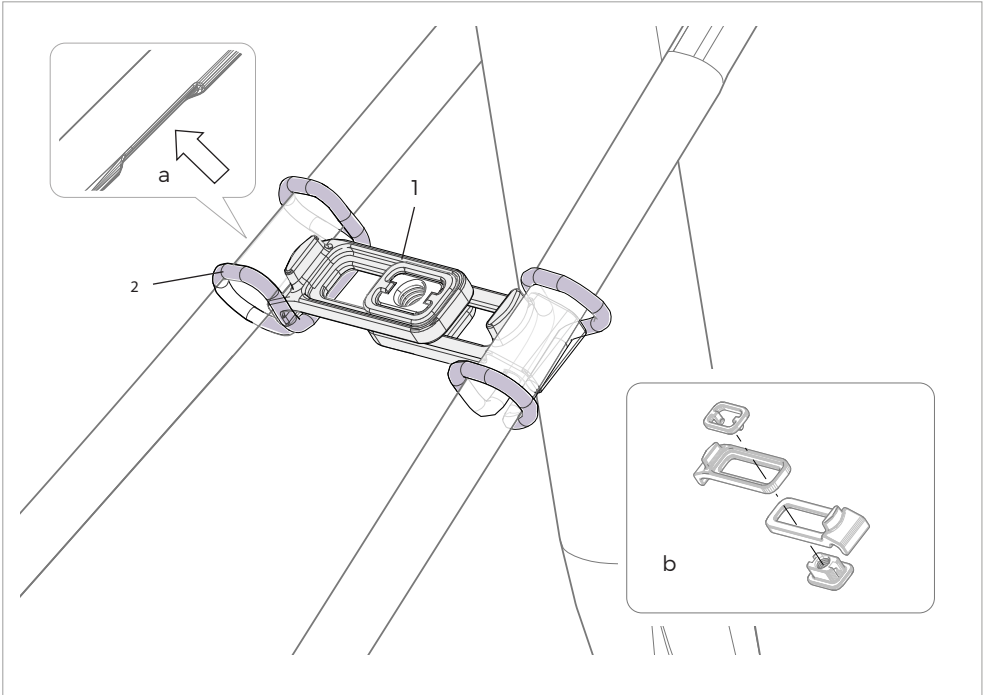
## Di2 Internal Routing



- From the handlebar, the Di2 wire (DTW) follows the brake hose to the down tube hole; wire goes through the hole in the underside of the down tube near the head tube.
- Front derailleurs (FD) : wire goes through hole in the side of the seat tube behind the front derailleurs mount.
- Rear derailleurs (RD) : wire goes through the hole in the underside of the chain stay near the dropout. (May need to wiggle it past the CS bond joint approximately near the chainrings.)
- Battery (BAT): in the seat post.
- All wires join at the junction box (JB) inside the frame's bottom bracket shell as usual.

## Rear Fender Bridge

Optional fender bridge (1) allows you to mount a compatible fender.



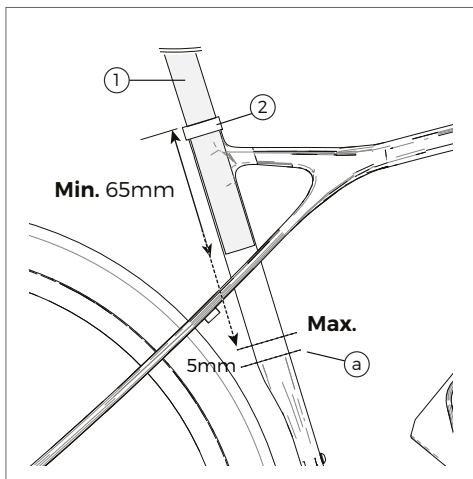
### Installation

Assemble as shown, making sure the bridge registers in the molded flat (a) on each seat stay.

1. Snap the two sliding bridge pieces together using the two metal nut pieces. Orientation (shown b) of the two metal nut pieces matters: the fender bolt must pull the threaded piece into the un-threaded piece.
2. Hook each O-ring around each side as shown, first inside the stay, then up and over the outside of the stay and hooked again around the bridge's hook.
3. Assemble your fender using the threads in the metal nut. This will fix the position of the two sliding bridge pieces as well.



## Seat Post



1. Seat Post                      a. Bottom Out limit  
2. Seat Binder

### Minimum Insert

The minimum insert depth the seat post must be inserted into the frame is 65mm.

### Maximum Insert

The total length of seat post that may be inserted will vary with the frame size and should be checked in each frame.

Frame Size (cm)	Maximum Insert (mm)
44	190
48	190
51	190
55	225
58	265
62	300

### Sizing a seat post

#### NOTICE

Use the correct seat post length shown above. Do not force or bottom-out the seat post inside the frame.

If the seat post must be cut, use the appropriate saw blade for the seat post material, aluminum or carbon. Lightly sand the edges of the cut seat tube with light sandpaper. Re-mark the minimum insert line on the post.

**BE SURE TO REMOVE ANY INSTALLED BATTERY BEFORE CUTTING A SEAT POST.**

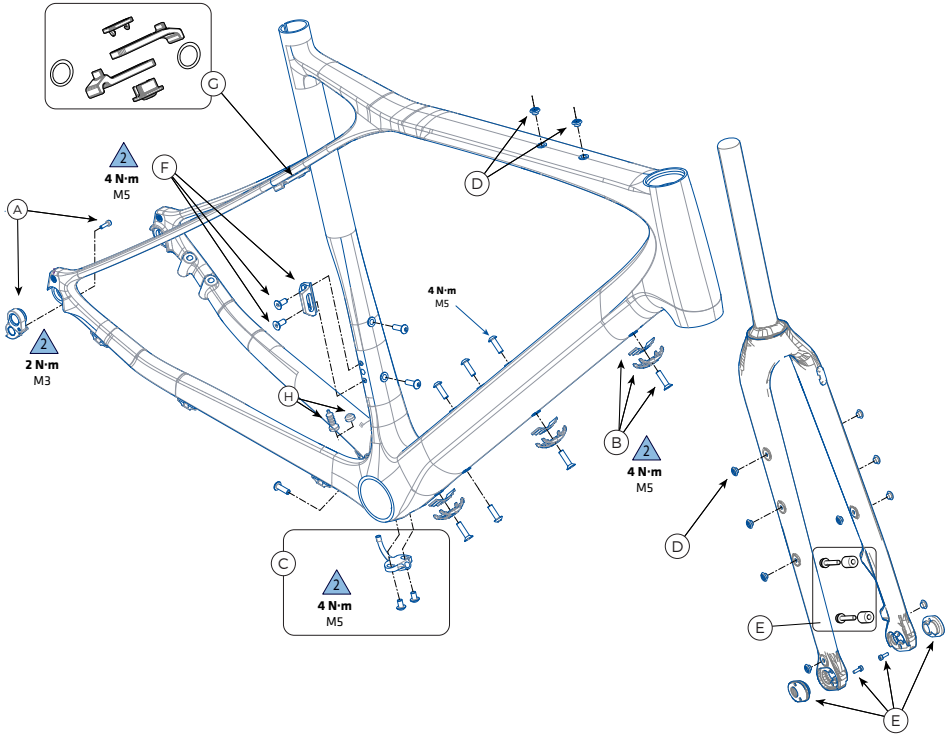
#### **WARNING**

THE SEAT POST MUST ONLY BE CUT BY A PROFESSIONAL BIKE MECHANIC. Incorrectly cutting the seat post can result in damage leading to an accident.

### Maintenance

Periodically, remove the seat post and the clamp assembly to clean, inspect for damage and renew the application of grease or carbon gel.

## REPLACEMENT PARTS



ID	Part Number	Description
A	K33030	Derailleur Hanger TA ST SS 075
B	K32007	Downtube X Cable Guides QTY 3
C	K32200	BB Cable Guide E249071
D	K34010	Grade Frame Grommets QTY 5

ID	Part Number	Description
E	K25009	Thru Axle Flip Chips
F	K33020	Grade Crb Front Derailleur Hanger
G	K11010	Grade Crb Fender Bridge
H	K32290	Grade FD Plugs



**WWW.GTBICYCLES.COM**

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