



(Disputes Tribunal Act 1988)  
**ORDER OF DISPUTES TRIBUNAL**

[2023] NZDT 583

**APPLICANT** DI

**RESPONDENT** U Ltd

**The Tribunal orders:**

1. DI's application is dismissed.

**Reasons**

2. In October 2022 DI purchased a [bike model 1] from U Ltd, which trades as DT, and is a retailer of bicycles. The bike has failed while being ridden, sustaining frame damage. DI claims the bike was not fit for purpose and seeks a refund of the purchase price.

**Mountain biking.**

3. Mountain biking can place physical stresses on riders and equipment, as riders navigate their way down tight, windy trails at speed. Some trails are also designed with drops and jumps, which require the rider and bicycle to leave the ground. Trails in New Zealand use a 6-level grading system, extending from a grade 1 trail; a mostly flat wide trail with little or no objective hazard (such as a gravel road), up to grade 6 trail; a Freeride or Downhill race trail, with large drops and jumps and high objective hazard. The obstacles and features on trails at the upper grades of 5 to 6 place high levels of force of both rider and equipment. Riders on such trails will often wear full face helmets and pads. A rider who falls on a grade 5 or 6 feature on a trail has a reasonable risk of injury.
4. As riders have differing abilities, performance needs, and appetites for risk, manufacturers produce models to suit. A bike suitable for riding trails of varying difficulties all day is a compromise between weight, cost and durability. A downhill or freeride model designed to ride grade 6 trails will have long travel suspension, will be built with thicker, stronger, frame materials, a stronger wheelset, and more puncture resistant tyres. Such performance comes at a cost of weight, and uphill pedalling performance. A bike suitable to ride for many hours needs to be lighter, meaning that durability and downhill performance will be compromised. Manufacturers characterise the bikes into the following loose categories;
  - a. Downhill bikes are designed for riding downhill with no compromise for uphill riding, as they are usually taken back uphill using a vehicle (a practice known as "*shuttling*") or on a chairlift or Gondola at a bike park. Such bikes will usually have 180mm of rear suspension travel and will be equipped with 180-200mm travel forks with 40mm stanchions. They pedal poorly due to the higher weight and slacker frame geometry which is maximised for downhill performance.

- b. Enduro bikes are designed for downhill riding performance but built more lightly, and with less slack geometry so that the rider can pedal back up the trails under their own steam. Such bikes will usually have 150-180mm of rear suspension travel and will usually be equipped with forks with 150-180mm travel and 38mm stanchions. While they pedal better than a DH bike, weight, length of travel, and frame geometry are focused more on downhill performance than uphill. [Bike brand]'s model is [bike model 2], which also comes as an e-bike model.
  - c. Trail bikes (or more recently down country bikes) are designed as a compromise between technical performance, weight, and ability to pedal uphill. Such bikes will usually have 130-150mm of rear suspension travel and be equipped with 130-150mm travel forks with 34-36mm stanchions. These models are a compromise between downhill and uphill performance, in terms of weight, geometry, and travel. The [bike model 3] is [bike brand]'s trail model, which also comes as an e-bike model.
  - d. XC or cross-country bikes are maximised for climbing performance, compromising frame and component strength for lower weight. These bikes may be hardtail, or full suspension with 100-130mm travel. Such bikes will usually be equipped with 100-120mm travel forks with 30-32mm stanchions. The light weight and steeper geometry are designed for race performance climbing. Only the lightest or most skilful riders could take an xc bike down a true grade 5 trails. Grade 6 on an xc bike would be extremely risky. [Bike brand]'s model is the [bike model 4].
5. Another factor is rider weight and the aggression with which they ride. A lighter or smoother rider may use lighter equipment on harder trails, knowing the force the equipment has to deal with is lower. A heavier or more aggressive rider is more likely to damage equipment.

## Background

6. The bike in question is a [mountain-bike model 1], the electrified version of [bike brand]'s trail model. It has 140mm travel rear suspension and the original fork had 150mm travel with 36mm stanchions. Various [mountain bike models] have been produced by [bike brand] since at least 2005. DI considered the [bike model 2] with 170mm of travel but instead chose the [bike model 1]. This is due to the rear shock set up which is dictated and limited by the shock linkage of the carbon fibre framed [bike model 2].
7. DI says that CU, U Ltd's Director, was aware that he rode grade 5 and 6 trails (including a jump track at [track]) and was a "rowdy" rider due to his experience riding motocross in his younger days. He admits that he rides fast and hard and has a history of breaking bike frames. He says he was advised by CU that the [bike model 1] would be suitable for this type of riding. CU disputes this, advising that DI was looking for an e-bike suitable for multiday riding with no range anxiety. He says there was no mention of grade 5-6 riding. He says that DI suggested the [bike model 1] and had been looking at a second-hand model on [website].
8. The bike was purchased on 5 December 2022. After purchase it was fitted with an after-market [brand] fork with a longer crown to axle length and 30mm more travel, and the wheels were fitted with cushcore tyre inserts and doubledown cased [brand] tyres. The tyre inserts are designed to allow better traction by protecting the rims and wheels while allowing lower tyre pressure, and the doubledown is a heavier, stiffer, more puncture resistant tyre wall. The longer fork and tyre features were intended to maximise downhill performance on technical trails.

9. On 6 December 2022, DI took the bike for its first off-road ride. He rode [grade 4 track] and [grade 5 track]. On [grade 5 track] he had a crash, which from his description and the damage to the gear shifter, which is on the right of the handlebars, I infer involved the right hand (drive) side of the bike impacting the ground.
10. On 7 December 2022, DI texted CU asking if he could sell the bike for him, He later advised that he had changed his mind advising on 8 December that "*the bike goes great on slow tech grade 5s*".
11. On inspection it was discovered that the rear wheel had sustained damage in the crash on 6 December, as had the shifter. DI went to U Ltd with the bike, and raised a warranty claim for the rear wheel, advising that he intended to buy a stronger wheelset. On 12 December 2022, the warranty was raised with [bike brand] for the wheel damage. [Bike brand] declined the warranty claim as the wheel had failed due to crash damage, subsequently DI collected the bike.
12. On 3 January 2023, DI texted CU asking for time to discuss the bike. He said:  
*It'll be worth 30min of your time to got through this forum [an online forum discussing [bike model 2]] I'm sure it will convince you that this frame will fail within hours of me riding it every time... Regardless of [bike brand's] response, I want to talk in person about working a deal to get us both out of owning this product and getting me on a suitable bike that I can use for mountain biking*".
13. On 6 January 2023, DI returned the bike to U Ltd, and inspections showed that the frame had suffered a 3-4 degree twist. The twisting had occurred at the down tube at the area where the u-shaped battery compartment meets the closed in section of down-tube where the motor housing and bottom bracket are located. The battery mount, which is welded inside the compartment appeared to have caused a stress riser which had caused cracking of the down tube aluminium. A warranty was raised with [bike brand] who replaced the frame.
14. There were supply chain issues which meant that the replacement frame was supplied to DI on 15 March 2023. He says he rode the bike at [racetrack location], an area where the main trails are a downhill racetrack and a jump track.
15. On 6 June 2023, DI returned the bike saying he noticed a paint crack in a similar area to where the first frame had failed. U Ltd and [bike brand] said that the crack was a minor paint flaw, and is not indicative of a frame failure. Later evidence from an independent bicycle mechanic was that the second frame had suffered a 3–4-degree twist.
16. DI says the bike is not fit for purpose and seeks a refund. U Ltd has offered a second warranty frame, which DI has refused.

### **Issues**

17. To resolve this application, I need to consider:
  - a. What did DI advise about his intended use of the bike?
  - b. What was the mechanism of damage?
  - c. Was the bike fit for the purpose?
  - d. What is a reasonable outcome?

### **Intended use**

18. The Consumer Guarantee Act 1993 (CGA) implies guarantees into consumer contracts that goods are reasonably fit for purpose. Section 8(1)(b) requires that goods are reasonably fit for

any purpose a consumer makes known expressly or by implication to the supplier. If goods fail to meet the guarantee of acceptable quality, and the failure is substantial, sections 21 and 22 CGA enabled a consumer to reject the goods and seek a refund. A bike's frame is the single most important component, as the frame design and materials dictate. The failure of a bike frame is a substantial breach, if a lack of fitness for purpose is proven. The onus is on DI to prove that the bike was not fit for purpose.

19. DI contends that the design of the bike is faulty, and both frames failed under normal riding loads. He says the design is flawed and a replacement frame will fail at the same point. He says that his riding was at a moderate level which and the bike should have managed the forces imparted upon it but failed to do so. He says that CU was aware of his style and level of riding and knew that he would be riding the bike aggressively on grade 5-6 trails. This is evidenced in his opinion by the bike being fitted with a longer stiffer [brand] fork, a component designed for harder and more forceful riding.
20. CU and MU (who appeared at the first hearing) gave evidence that U Ltd has sold over 100 e-[mountain bike brand] models and the only 2 frames which failed were those provided to DI. Their evidence was that they did not know of DI's riding history or intention to ride harder trails. CU's evidence, which was not disputed, was that DI came to him with a photo showing an e-[bike model 1] model off [website]. They say that they inferred nothing from the fitting of the [brand] fork, which is a common change for riders to make.
21. NU, [bike brand]'s technical manager gave evidence that [bike brand] had no other warranty issues with the [bike model 1] frame. The frames which were referred to on the overseas online forum were the [bike model 2] I and had been used in bike park situations. He advised that [bike brand] had sold more than 300-400 [bike model 2] and had warranty issued with less than 10. He advised that the [bike model 1] was suitable for trails up to easier grade 5 and failed as it was pushed outside of its design envelope. His opinion was that DI was using the bike for downhill riding which it was not designed for.
22. The evidence is that DI did not advise U Ltd that he intended to use the bike for higher grade riding, or that he was a rowdy rider who had a history of breaking equipment. Rather, the evidence, accepted by DI is that the use made known to U Ltd was that the bike would be used for mid-grade multi-day riding, albeit on technical trails. This is the level of riding the [bike model 1] is designed for. By implication the bike needed to be fit for riding this sort of trail. The question for me is whether the bike was fit for this level of riding (lower-level grade 5).

#### **What was the mechanism of damage?**

23. Usually frame failures from high-energy forces and impacts occur at the headtubes, rear suspension pivot points, and seat stays, as these are the points at which the most lateral forces are imparted as the bike moves forward over rough terrain. While a frame, fork, and wheelset are mechanically stiff (in descending order), tyres and, in this case, tyre inserts, are comparatively pliable and flexible.
24. Wheelsets and tyres are weak points for torsional forces as they are mechanically weak for sideways loading. This means that for the stiffer components to be damaged the forces must either exceed the capacity of the suspension and pliable components, or the forces must come from a direction where the suspension and flexible components offer no protection.
25. The frame failures in this instance have occurred at a transitional point in front of the bottom bracket area, due to torsional forces. The transitional point is where the welded battery mount

joins the thinner downtube alloy. This suggests that both frames have suffered significant sideways forces, at odds with the forces imparted in a low-speed crash.

26. The independent mechanic's opinion was that the damage to the second frame had occurred due to "*forceful, side on pressure between the front and rear axles*". DI's colleague, a mechanical engineer provided an opinion that the design of the transitional point is such that "*a crack is highly likely to initiate in this location under heavy bending or torsional loads (expected when riding intermediate or advanced downhill trails).*"
27. As a mountain biker with over 30 years' experience, including regularly riding many of the trails referred to in this case, I cannot agree that intermediate trails will place heavy bending forces or torsional loads on a bike frame under normal riding conditions. This is because this part of the bike is mainly exposed to the torsional forces of peddling, which, even for the strongest and heaviest of riders are not heavy bending forces. The type of crash which DI describes would also not impart such forces on this part of the frame. The forces involved to create such a level of damage suggest either high speeds or impacts from gravity loads dropping off large features, or larger jumps.
28. I conclude that the damage to both frames has occurred due to heavy crashes. I cannot speculate as to the exact mechanism, but the forces involved sideways pressure. Such forces are not normal forces experienced by a mountain bike on intermediate level trails under normal riding conditions.

**Was the bike fit for purpose?**

29. The bike was designed and sold as a trail model, it was designed for lower level advanced and intermediate riding. The damage sustained is not consistent with normal use on these types of trails.
30. DI has not shown that the bike was not fit for purpose, therefore I must dismiss his claim.

**Referee: C D Boys**

**Date: 5 December 2023**



## Information for Parties

### Rehearings

You can apply for a rehearing if you believe that something prevented the proper decision from being made: for example, the relevant information was not available at the time.

If you wish to apply for a rehearing, you can apply online, download a form from the Disputes Tribunal website or obtain an application form from any Tribunal office. The application must be lodged within 20 working days of the decision having been made. If you are applying outside of the 20 working day timeframe, you must also fill out an Application for Rehearing Out of Time.

PLEASE NOTE: A rehearing will not be granted just because you disagree with the decision.

### Grounds for Appeal

There are very limited grounds for appealing a decision of the Tribunal. Specifically, the Referee conducted the proceedings (or a Tribunal investigator carried out an enquiry) in a way that was unfair and prejudiced the result of the proceedings. This means you consider there was a breach of natural justice, as a result of procedural unfairness that affected the result of the proceedings.

PLEASE NOTE: Parties need to be aware they cannot appeal a Referee's finding of fact.

Where a Referee has made a decision on the issues raised as part of the Disputes Tribunal hearing there is no jurisdiction for the District Court to reach a finding different to that of the Referee.

A Notice of Appeal may be obtained from the Ministry of Justice, Disputes Tribunal website. The Notice must be filed at the District Court of which the Tribunal that made the decision is a division, within 20 working days of the decision having been made. There is a \$200 filing fee for an appeal.

You can only appeal outside of 20 working days if you have been granted an extension of time by a District Court Judge. To apply for an extension of time you must file an Interlocutory Application on Notice and a supporting affidavit, then serve it on the other parties. There is a fee for this application. District Court proceedings are more complex than Disputes Tribunal proceedings, and you may wish to seek legal advice.

The District Court may, on determination of the appeal, award such costs to either party as it sees fit.

### Enforcement of Tribunal Decisions

If the Order or Agreed Settlement is not complied with, you can apply to the Collections Unit of the District Court to have the order enforced.

Application forms and information about the different civil enforcement options are available on the Ministry of Justice's civil debt page: <http://www.justice.govt.nz/fines/about-civil-debt/collect-civil-debt>

For Civil Enforcement enquiries, please phone 0800 233 222.

### Help and Further Information

Further information and contact details are available on our website: <http://disputestribunal.govt.nz>.