

## BRITISH MOUNTAINEERING COUNCIL

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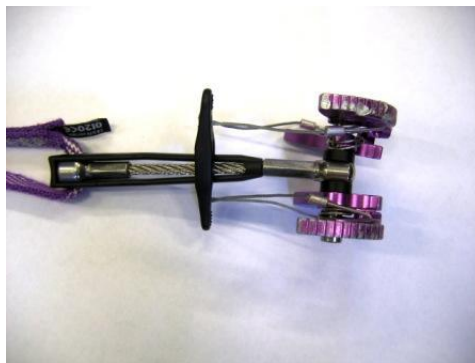
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### TECHNICAL COMMITTEE MEMORANDUM TCM 09/02

#### Wild Country Technical Friend 3 - Broken in Fall Incident Ref. 08/09/L.HOU

#### SUMMARY

A Wild Country Technical Friend failed in a fall. It is concluded that this was due to the device being twisted because of the choice of placement.



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<b>Draft:</b>	B
<b>Approved for issue by the EIP:</b>	16/05/2011

## **1. INTRODUCTION**

This Wild Country Technical Friend 3 was sent in by Richard Houbart after it broke when he took a fall on Mythical Wall (E1 5b) at Souters Head, Aberdeen. He reported that he placed three Rocks on wire then this Friend at about seven to eight meters and fell from about two meters above it. The Friend broke in the fall and he was held by the top Rock. He states that he “placed it as best as possible with regards to placement of all cams and the direction of the fall” and it was “felt to be a good placement”. He was not injured in the fall.

## **2. EXAMINATION**

As can be seen on the photographs the stem of the Friend is bent (Figs 1 & 2) and one of the inner cams has sheared away from the axle (Figs 3 & 4). The surfaces of two of the cams are badly damaged (Figs 4 & 5) and all the trigger wires are bent. From an examination of the undamaged stem and the tape sling it appears that the Friend was in good condition before the fall and had not been used a great amount.

## **3. DISCUSSION**

It is obvious from the damage to the Friend that it was twisted when loaded in the fall. From the damage and distortion that the device has suffered, it is also clear that it was subjected to a significant load before it failed. We have seen this type of failure before and a comprehensive examination was carried out at the time and a Technical Committee Report written (Ref 1). The conclusions from this earlier report were that the camming device failed due to twisting and there was no evidence of any manufacturing defects. These devices are not designed to withstand the torsional forces involved if subjected to twisting in a fall so it is considered that the cause of failure was a poor choice of placement. However it is recognised that often there is no alternative placement (this was certainly the case in the incident described in Ref 1) so unfortunately Mr Houbart was unlucky.

## **4. CONCLUSIONS**

It is concluded that this Friend failed due to torsional overload caused by a placement where the direction of loading in the fall was not along the axis of the device.

## **5. RECOMMENDATIONS**

In view of the fact that we have seen this type of failure before it is recommended that a short article be prepared for Summit Magazine to point out that camming devices should be placed with care so that the force in a fall will be along the axis and any twisting of the device is likely to cause failure.

## **6. REFERENCES**

- 1 TCM 05/05 Snapped No 3 Cam.

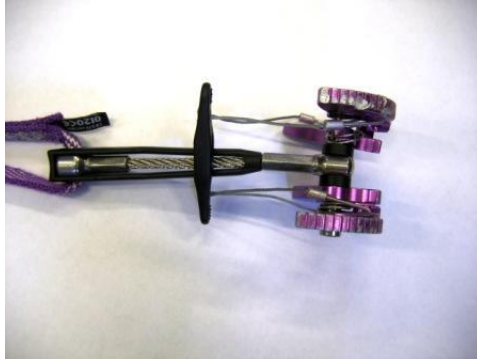


Fig 1



Fig 2



Fig 3

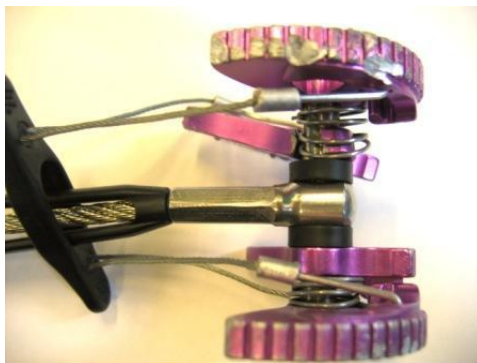


Fig 4



Fig 5