

# WD Head Exchange

By Frank Meincke  
Gefund-IT (Data Rescue)

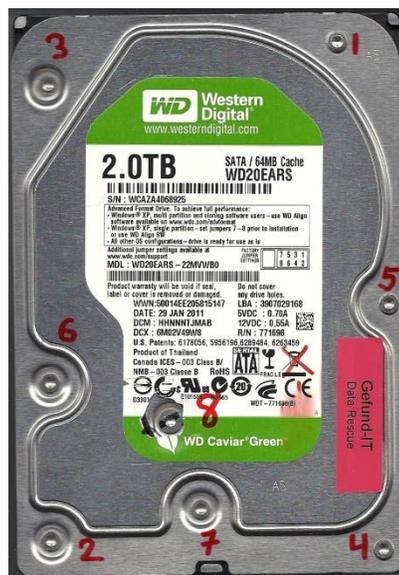
## How to avoid the Click of Death on a Head Exchange

**Problem:** When exchanging the read/write heads on Western Digital Hard drives, if one does not reassemble the hard drive correctly, the hard drive will begin clicking with the new heads. The heads on these drives use screws on the top cover to align the heads. Once removed, alignment is rather difficult.

**Solution:** I disassemble and reassemble the hard drives in a systematic order with the proper tools.

**Warning:** This is a guide! If one disassembles a hard drive and renders it non-functional and the data non-recoverable that is the risk you take.

1. Prepare the drive for work. Remove the stickers which are covering the various screws on the hard drive. Warning, doing so will also void the warranty.
2. Systematically remove the screws from the top of the hard drive. I use the method one would use on a car's wheel- A system of crosses. This ensures that the top cover of the hard drive does not bend or warp.
  - a. Loosen and remove the following screws in two cycles: 1, 2, 3, 4
  - b. Loosen and remove the following screws in two cycles: 5, 6, 7
  - c. Loosen and remove the remaining screw: 8



3. Head exchange: I use the tools which are developed by HDDSurgery for ensuring the heads remain undamaged. The tool set comes with two Head Exchange tools, one for the donor and one for the patient heads. The tool slides between the heads and ensures they do not touch one another and that they maintain the proper distance to slide easily on the parking ramp. The tools are so well crafted that I am able to transfer the donor heads back to the original drive with full functionality.



4. When the head exchange is finished, it is time to place the cover back onto the hard drive housing. When fastening the screws onto the housing, we use almost the same method as we did removing them. When tightening the screws, the first cycle is to get the screws to apply minimum pressure on the cover. The second cycle is to snug the screw (two fingers on the screwdriver tight)
  - a. Insert and tighten the following screws in two cycles: 1, 2, 3, 4, 5
  - b. Insert and tighten the following screws in two cycles: 6, 7
  - c. Insert and tighten the following the remaining screw: 8



Conclusion: Since using this methodology, I have transferred many Western Digital heads and have not encountered alignment problems, for the drives have spun up and were functional enough for data recovery. I have then transferred the heads back to the original donor and the donor drive was then functional again. Using this process should help you with avoiding a clicking hard drive as well as being able to reutilize heads for another transfer.

©2011, Frank Meincke

#### Author's Bio

Frank Meincke is the founder and data recovery specialist at Gefund-IT (Data Rescue) [www.gefund-it.de](http://www.gefund-it.de) who brings affordable data recovery to the clients served by his company. He is a Certified Data Recovery Professional from IACRB and has trained with Ace Laboratory and DeepSpar on the use of the PC-3000 for hard drive restoration and data recovery. Frank is a Certified Computer Examiner who had the privilege of training at the Defense Cyber Investigations Training Academy (DCITA) and being awarded Department of Defense Certified Digital Forensic Examiner. He maintains the credentials of EnCase Certified Examiner, AccessData Certified Examiner as well as CISSP and MCSE. During the course of his career he has attended over 1200 hours of computer specific training. When not at work, Frank enjoys being with his family and when time permits you may catch him snowboarding on the Alps during the winter.