



Case Study: Recovery from WD3000-00KLB0 (Buccaneer Family)

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Problem:

Drive clicks and will not come ready.

Patient Drive

WD3000JD-00KLB0
WCAMR1638713
DCM: DSCHCAJCH
DATE: 07 JUL 2005
PCB: 2061-701335-B00
FW: 008002S 0,1,2,3,4,5
Microjog values 1500-1590

Preliminary Observations & Diagnostics

This pre-Royal family is fairly rare, and the circuit board topology and hole pattern is unusual, too.

We didn't have a suitable donor in stock. A similar PCB is a 2061-701293 from a WD400BD-08JMCO, but an attempt to program the ROM with the ROM from the patient bricked the drive.

We ordered a donor with the same model number, but the head map was different, and hot-swapping didn't provide us with better access:

First Donor Drive - for diagnostics

FW: 008003J 0,1,2,5,6,7
Microjog 1530-1690

We used the PCB from the 1st donor drive and programmed it with the ROM from the patient. It killed the ROM, so we burned a ROM separately and installed it on the PCB. This allowed us to conclude that it was a heads / preamplifier problem.

We were back to needing two additional donors; one for head swap and the other for smart hot swap.

Because suitable donors are both expensive and difficult to determine heads map, we looked for a heads donor from another family, in this case Raider:

2nd Donor Drive - for head swap (Raider family)

WD3000SB-01KMA0
WCAMR2368444
DCM: HSBACAJCA
DATE: 20 FEB 2006
PCB: 2061-701314-A00
MAP: 0,1,2,3,4,5
Microjog values 1500-1600

Note that both the Buccaneer and Raider have lid / head alignment issues.

We purchased a third donor drive for smart hot swap:

3rd Donor Drive - for smart hot swap

WD3000JD-00KLB0
WCAMR2671336
DCM: HSCHCAJCH
DATE: 07 MAY 2006
PCB: 2061-701335-B00
FW: 008003F 0,1,2,3,4,5
Microjog values 1618-1720

There are some important peculiarities with this patient drive and family:

- Can't alter heads map in RAM
- Can't write / replace SA tracks or modules. The PC3000 reports that it is writing modules and tracks, but when you test them, they are the same as the original!

There are some other issues which are shared by a few other Marvel families in models made prior to the Royal series, i.e

- Can't change heads map in ROM without the possibility of bricking the ROM
- Can't write to ROM or replace ROM without bricking drive

In other words, you can't creat a working smart hot swap donor.

However, data can be accessed using regular hot swap!

There are some bad areas on the resulting map in Data Extractor; we are not sure if the problems are due to the differing P-Lists or if there are media issues with the patient.

Preliminary tests after imaging show file integrity.