

# SATA Compatibility Modes

## WD Caviar® Hard Drive Labels are Key to Determining SATA Compatibility

WD Caviar WDxxxJD/BD hard drives are available with one of two SATA interfaces: native SATA 300 MB/s or SATA 150 MB/s. The hard drive label displays indicators that determine which SATA interface is included with the drive.

### Native SATA 300 MB/s Drive Label

The WDxxxJD/BD hard drive label shown in Figure 1 indicates that the drive interface is native SATA 300 MB/s.

1. The **-xxLXxx** model number suffix is present.
2. “Jumpers pins 5 and 6 enable SATA 150 MB/s only operation” statement is present (**-00xxxx** and **-22xxxx** model number suffixes only).

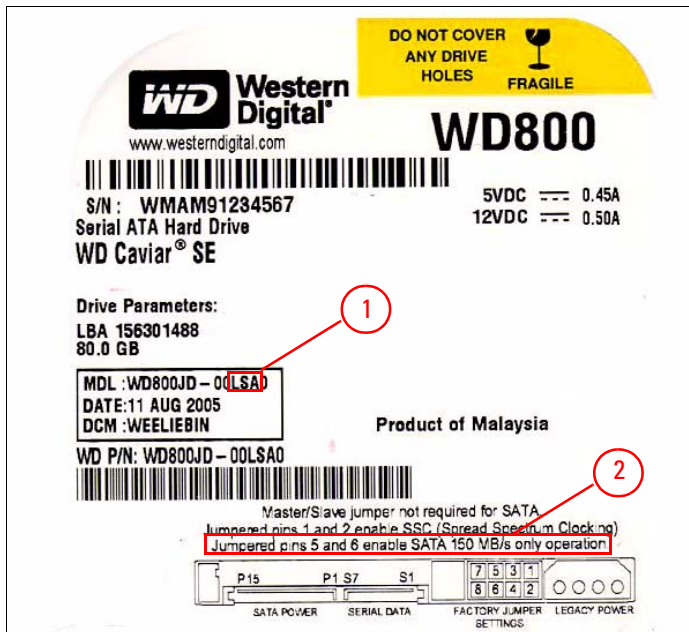


Figure 1. WDxxxJD/BD Native SATA 300 MB/s Drive Label

### Drive Not Detected with Certain Chipsets

WD is one of the the first companies to ship a SATA drive with the 300 MB/s data transfer rate. Using autospeed negotiation, our SATA 300 MB/s drive automatically detects the motherboard data transfer rate, making it backward compatible with 150 MB/s data transfer rates. However, because this technology is so new, some older motherboards are unable to support autospeed negotiation and cannot recognize the drive.

When a SATA 300 MB/s drive is used with one of the following chipsets, the host cannot detect the hard drive during bootup. This “drive not detected” condition occurs when a chipset is incapable of correctly negotiating the data transfer speed with a SATA 300 MB/s drive. The following chipsets are affected:

VIA Chipsets	SIS Chipsets
■ VT8237	■ SIS760
■ VT8237R	■ SIS964
■ VT6420	
■ VT6421L	

### Solutions

- To achieve 300 MB/s data transfer rate, use a PCI- or PCI Express-based host bus adapter.
- To lock the drive at 150 MB/s data transfer rate, install a jumper on pins 5-6 (OPT1) as illustrated in Figure 1, number 2.

### SATA 150 MB/s Drive Label

The WDxxxJD/BD hard drive label displayed in Figure 2 indicates that the drive interface is SATA 150 MB/s.

1. The **-xxJXxx** model number suffix is present.
2. “Jumpers pins 5 and 6 enable SATA 150 MB/s only operation” statement is not present.

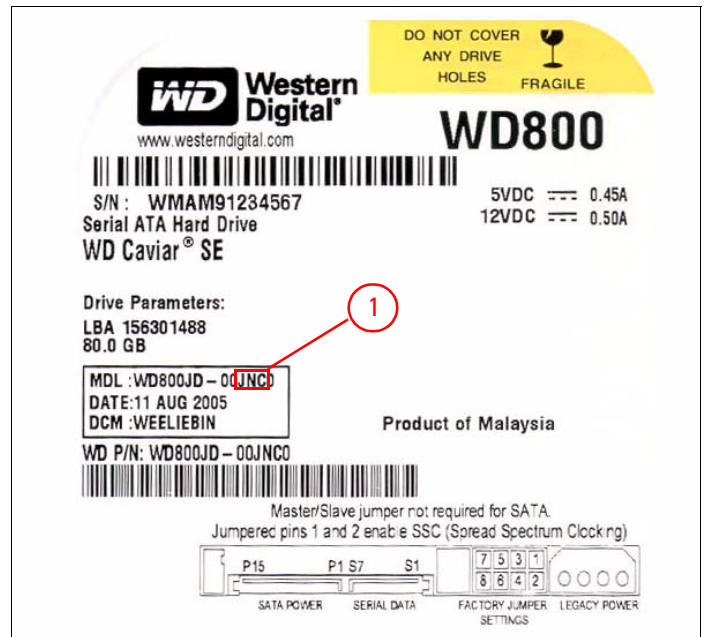


Figure 2. WDxxxJD/BD SATA 150 MB/s Drive Label