

Head Swap Donor Matching Guide

The following instructions are for maximizing compatibility when looking for a donor head stack assembly. Be aware that there is no way to 100% guarantee a match, but following these guidelines will help you increase the chances of locating a successful donor.

Locate the make of hard drive you are working on, and then try to match the specs listed. Please note that we do not cover Quantum or very old Western Digital drives (pre-Caviar) here. For any information visible on the label, we have highlighted where you can find that in the accompanying example label for each type. Your label may look different, depending on the date or the product line that the drive belongs to.

We have prioritized and color coded each aspect. Chances are, you won't be able to find a donor that matches all of these specs, but using the color-coding you can see which information is more important.

- **RED** - Essential. You almost certainly cannot use a donor without this matching.
- **ORANGE** - High priority. This information often is required to match for a donor to be compatible.
- **YELLOW** - Medium priority. This information can help increase the chances of compatibility if a match is available.
- **GREEN** - Low priority. This is normally not a factor, but can be used to choose between multiple donors matching everything else.

SELECT A BRAND

Fujitsu

Samsung

Hitachi

Seagate

IBM

Toshiba

Maxtor

Western Digital

Western Digital

Caviar 1st Edition

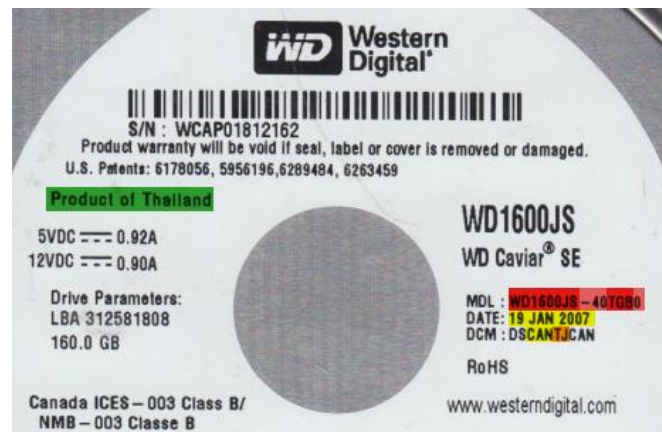


These are generally drives that are 10 or more years old. They can be differentiated by having a PCB that is, more or less, square compared to the L-shaped PCBs of later models.

Use the following criteria to find a donor drive.

- **Model number:** Match the entire first part of the model number as well as three characters in the second part. Eg: **WD800BB-55JKA0**
- **Heads map:** Match the physical heads (PH) map exactly. It is OK if the donor has more heads than the original drive, but all heads before that should match.
- **DCM:** Locate the J or 2 in the DCM. It should be towards the end. Make sure that the J or 2 as well as the preceding character matches on the donor.
- **Country of manufacture:** Should be the same.
- **Date of manufacture:** Should be within three months — the closer the better.
- **Serial number:** Match the first four digits of the serial numbers.
- **PCB Revision:** The PCB Rev should be the same.

Marvell (version 1)



These drives can be identified by the family code in the model number (the 3rd and 4th digits after the hyphen). The following families are part of this type: Mammoth (family codes EY, EZ, FA, FC, FJ, FM, HE, HF, JE, JS, JT, JY), Sabre (JH, JJ, JK, JL, JM, JN, JP, JR, JU, KS, LN, MG), Hawk (MH, MJ, MK, ML, MV, MW, MY, MZ, NC, ND, NE, NF, NG, NH, NJ, NK, NT, NV, NY, PA), Hawk-2 (SG, SH, TG), Starling (RD, RE, RF, RJ, RK, RL), Buccaneer (KE, KF, KG, KM), Zeus (MN, MP, VJ), and Raider (PC, PD, PE, PF, PG). Even if these families of drives say "Caviar SE" on the label, they belong to the Marvell architecture.

Use the following criteria to find a donor drive.

- **Model number:** It is ideal to match the whole model number, but if none is available you can try one that matches the entire first part of the model number as well as these three characters in the second part: **WD1600JB-40TGB0**
- **Heads map:** Match the physical heads (PH) map exactly. It is OK if the donor has more heads than the original drive, but all heads before that should match.
- **DCM:** Locate the J or 2 in the DCM. It should be towards the end. Make sure that the J or 2 as well as the preceding character matches on the donor. If the three characters before that match as well, it will have an even better chance of being a match.
- **Date of manufacture:** Should be within three months — the closer the better.
- **Preamplifier:** Exact match for both vendor and revision.
- **Microjogs:** Each value should be within 300 of the original drive — the closer the better.
- **Country of manufacture:** Should be the same.



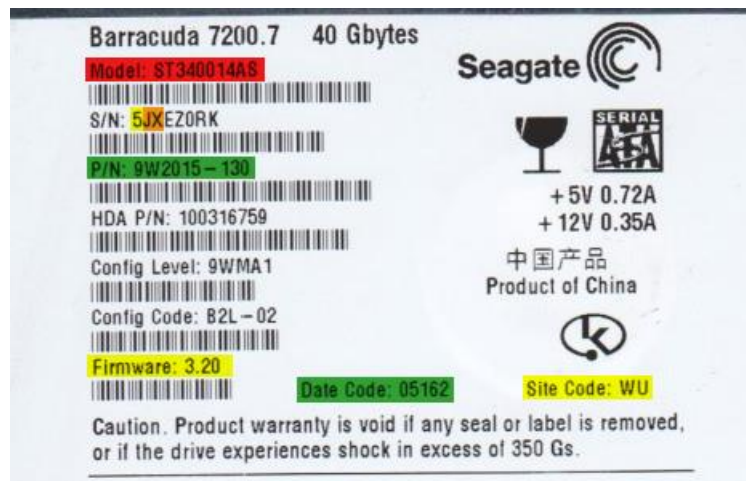
Marvell (version 2)

These encompass most newer and modern Western Digital drives.

Use the following criteria to find a donor drive.

- **Model number:** It is ideal to match the whole model number, but if none is available you can try one that matches the entire first part of the model number as well as these three characters in the second part: **WD1200BEVT-22A23T0**
 - **Heads map:** Match the physical heads (PH) map exactly. It is OK if the donor has more heads than the original drive, but all heads before that should match.
 - **DCM:** Locate the J or 2 in the DCM. It should be towards the end. Make sure that the J or 2 as well as the preceding character matches on the donor.
 - **Preamplifier:** Exact match for both vendor and revision.
 - **Microjogs:** Each value should be within 200 of the original drive — the closer the better.
 - **Country of manufacture:** Should be the same.
 - **Date of manufacture:** Should be within three months — the closer the better.
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Seagate Barracuda

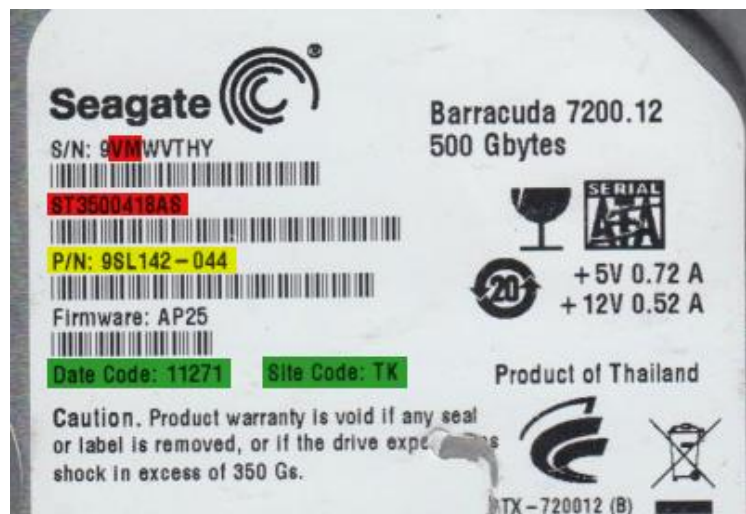


These drives can be identified by containing a period (.) in the firmware number.

Use the following criteria to find a donor drive.

- **Model number:** Match the model number exactly.
- **Heads map:** Match the physical heads (PH) map exactly. It is OK if the donor has more heads than the original drive, but all heads before that should match.
- **Serial number:** Match the second and third characters of the serial number.
- **Firmware (7-series or earlier):** Optional — for drives that are 7-series or earlier, match the firmware number.
- **Serial number:** In addition to the 2nd and 3rd digit, match the first character of the serial number.
- **Site code:** Match the site code. This indicates the location of manufacture.
- **Part number:** Match the 1st half of the part number. If the second half also matches, it is likely to be an even better match.
- **Date code:** Convert the date codes. They should be within three months of each other — the closer the better.

F3



These drives can be identified by **NOT** containing a period (.) in the firmware number.
Use the following criteria to find a donor drive.

- **Model number:** Match the model number exactly.
- **Serial number:** Match the second and third characters of the serial number.
- **Heads map:** Match the physical heads (PH) map exactly. It is OK if the donor has more heads than the original drive, but all heads before that should match.
- **Preamplifier type:** Optional — Match the first two digits of the preamplifier type.
- **Part number:** Match the 1st half of the part number. If the second half also matches, it is likely to be an even better match.
- **Site code:** Match the site code. This indicates the location of manufacture.
- **Date code:** Convert the date codes. They should be within three months of each other — the closer the better.

Samsung



Older

These drives can be identified by having a separate barcode sticker with two sets of numbers on it.

Use the following criteria to find a donor drive.

- **Model number:** Match the model number exactly.
- **Heads map:** Match the physical heads (PH) map exactly. It is OK if the donor has more heads than the original drive, but all heads before that should match.
- **Country of manufacture:** Should be the same.
- **P/V:** To the right of the part number. Some drives may be missing this field.
- **PCB revision:** PCB Rev should be the same.

Newer



These are 2.5" inch drives, series M7S2, M7E (i.e. Mercury / Rev .07 / S3M), MP4, MT2, M8E, and M9T, as well as 3.5" inch drives, series F3 or later. The series can be found printed on the PCB or in some instances on the drive label.

Use the following criteria to find a donor drive.

- **Model number:** Match the model number exactly.
- **Heads map:** Match the physical heads (PH) map exactly. It is OK if the donor has more heads than the original drive, but all heads before that should match.
- **Preamplifier revision:** The preamplifier revision should be the same.

Hitachi/IBM



Use the following criteria to find a donor drive.

- **Model number:** Match the model number exactly.
- **Part number:** Match the part number exactly.
- **Heads map:** Match the physical heads (PH) map exactly. It is OK if the donor has more heads than the original drive, but all heads before that should match.
- **MLC:** Match the MLC exactly.
- **Date of manufacture:** Should be within three months — the closer the better.

Toshiba



Use the following criteria to find a donor drive.

- **Model number:** Match the whole number. If you cannot do this, you may be able to match the first eight digits of the model number and the family code instead.
 - **Country of manufacture:** Should be the same.
 - **Hard drive code:** The first part of the HDD code should match.
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Maxtor



Use the following criteria to find a donor drive.

- **Model number:** Match the model number exactly.
 - **Four-letter code:** The 1st and 3rd digits are most important. If the 2nd and 4th digits also match, that further increases the likelihood of a match.
 - **Date of manufacture:** Should be within three months — the closer the better.
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Fujitsu



Use the following criteria to find a donor drive.

- **Model number:** Match the model number exactly.
- **Part number:** Match the part number exactly.