

I User Instructions

- 1, Search in the support list about the hard drive you are working on, if listed, find the corresponding head replacement toolkit (head combs) item number and have the toolkit standby; if not listed, you need to check and compare the existing toolkits with the platter thickness, heads parking positions, etc and select the closest or most suitable one to work with;
- 2, The following operations are categorized into two groups: Hard drives with inner parking zones and hard drives with outer parking zones;
- 3, We take the counterclockwise spinning the motor as example here (Note: clockwise spinning the motor is required for most Maxtor drives);
- 4, Head replacement refers to the replacement of the whole Head Stack Assembly (HSA) instead of partial replacement of HSA;
- 5, Any head replacement or component replacement by disassembling the hard drives must be performed in qualified clean room environment.

II General Head Replacement Steps & Instructions

1, Uninstalling Heads For Hard Drives With Inner Parking Zones

- Step 1: Disassemble the hard drives in clean room environment;
- Step 2: Remove the HSA electrical socket;
- Step 3: Remove the short separators frame (few drives have this one);
- Step 4: Remove the top magnet of the Voice Coil Motor or VCM and the HSA stopper;
- Step 5: Press on the coil of the VCM with your left hand fingers and counterclockwise spin the motor uniformly using your right hand fingers until 1 mm to the platter edge, this process should be done at one time to avoid the possibility of heads stuck to the platters;
- Step 6: Watch carefully and move gently the hollow parts of the head replacement toolkit (the head comb) into the Head arms. What's most important here is a suitable distance between the head arms and real reads, never move directly the head combs directly to the sliders area which will easily destroy the heads. Then continue using your left hand to spin the motor and move the heads out of the platters so that the head arms can be fully into the head combs with the heads remaining intact and out of the combs;
- Step 7: Adjust the position of the head replacement toolkit (the head comb) so that we can fix it with the head arms by inserting the locking pin to the mounting dots at the end of the head arms. Please note: Improper or rude operations may twist or even damage HSA;
- Step 8: Loosen and remove the screws and remove the HSA.

2, Installing Heads For Hard Drives With Inner Parking Zones

- Step 1: Fix the related components of HSA and head comb separating the heads already;
- Step 2: By using your right hand, gently push the head replacement toolkit (the head comb) into the platters

until it cannot move any more;

Step 3: Press on the coil of the VCM with your left hand fingers and counterclockwise spin the motor uniformly using your right hand fingers until moving the heads to the inner parking zone. No rude or quick or intermittent operation please!

Step 4: Install the HSA stopper, top magnet of the VCM and other components.

3, Uninstalling HSA For Hard Drives With Outer Parking Zones

Step 1: Disassemble the hard drives in clean room environment;

Step 2: Remove the HSA electrical socket;

Step 3: Push gently the head replacement toolkit into the head arms and move the heads to the edge of the platters. No heads touch is allowed within the process. If possible within this step, you can fix the head comb and head arms by locking pins, otherwise, continue to the next step;

Step 4: Remove the top magnet of the VCM and HSA stopper (VCM components are sometimes not easy to remove for some Hitachi drives, be more careful at this time);

Step 5: Gently move the head arms and adjust the position of head replacement toolkit (the head comb) in the head arms and then fix them by inserting the locking pins into the mounting dots of head arms. Move gently again the head arms so that it's off the parking zone;

Step 6: Loosen and remove the mounting screws of the HSA, then remove the HSA.

4, Installing The Heads For Hard Drives With Outer Parking Zone

Step 1: Fix the related components of HSA and head comb separating the heads already;

(VCM components are sometimes not easy to remove for some Hitachi drives, be more careful at this time)

Step 2: Push gently the head replacement toolkit and move the heads accurately to the parking zone;

Step 3: Install the HSA stopper, top magnet of the VCM and other components.

V Notes and Tips

1, Compatibility of the head replacement toolkit

* **Locking pins:** few drives don't work with the locking pins due to very small mounting dots of the head arms;

* **Head replacement toolkit:** For hard drives not listed above, you may find the closest or most suitable head combs and locking pins in the toolkit package to perform the head replacement. We will appreciate it a lot if you feed us back with your new tested hard drive details. For very old hard drives, we won't manufacture new toolkit but for new or popular hard drives not supported, we can manufacture new head replacement toolkits for them.

2, Hard drive structure compatibility

If the head replacement steps don't work for few hard drives with special inner structures, users can use the steps as reference and get their own unique solutions and steps for them. We haven't so far met such drives.

3, Details are important

* Sprung gap of the locking pins are different with their special purposes, please select the right ones to operate with. No rude operation! Any kind of twisting or quality loss of the HSA may add to the difficulty in reading and writing;

* Practice makes perfect and you must always learn to sum up experience and write down each useful working detail or step and finally you become one real expert.

Eg.: For WD800BB-00CAA1, whose platter centers are 7.1mm (5.8mm between platters), what's special here is that you need to use a tweezers to pull the bottom head gently a bit up when you move the head replacement toolkit out of the platters otherwise the bottom head will be damaged;

For HDS724040KLSA80, 10 heads/5 platters, whose platter centers are 3.2mm (1.9mm between platters), if you don't carefully replace the HSA with the toolkit, the HSA will be twisted or totally destroyed.

4, Antistatic treatment is strictly required in keeping and operating the HSA to avoid damaging the head chip (head pre-treatment electric circuit). Besides, necessary measures to protect the toolkit from humidity, rain, corrosion, overheat, shocks and damage should be considered and taken;

5, This head replacement toolkit is manufactured by high-precision injection moulding and is well-directed to high-success-rate head replacement. Any change to the shape or related parameters is not allowed;

6, The operation steps and hands used are to give you a good idea to understand how to use 28pcs HDD Head Replace tool kit and it is not mandatory. It is up to your own details and habits.