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Heat Sink Assembly Replacement Instructions for Ion Games with ECS Motherboards

CAUTION: *This installation should only be performed by a qualified service technician. Any maintenance performed on the motherboard is done at your own risk. Sensitive components are susceptible to damage, which could render the motherboard inoperative.*

Before handling the motherboard, or any components on the board, it is important to remove any static electricity from your body by touching a grounded piece of metal on the game. Failure to ground yourself before performing maintenance may result in damage to your system.

1. Turn off and unplug the game.
2. Unlock and open the CPU section to gain access to the motherboard. In Fusion games, you will also have to remove the 2 screws securing the electronics box cover and remove the cover.
3. Locate the fan attached to the motherboard, and disconnect the 3-pin fan connector from the motherboard. See Figure 1.

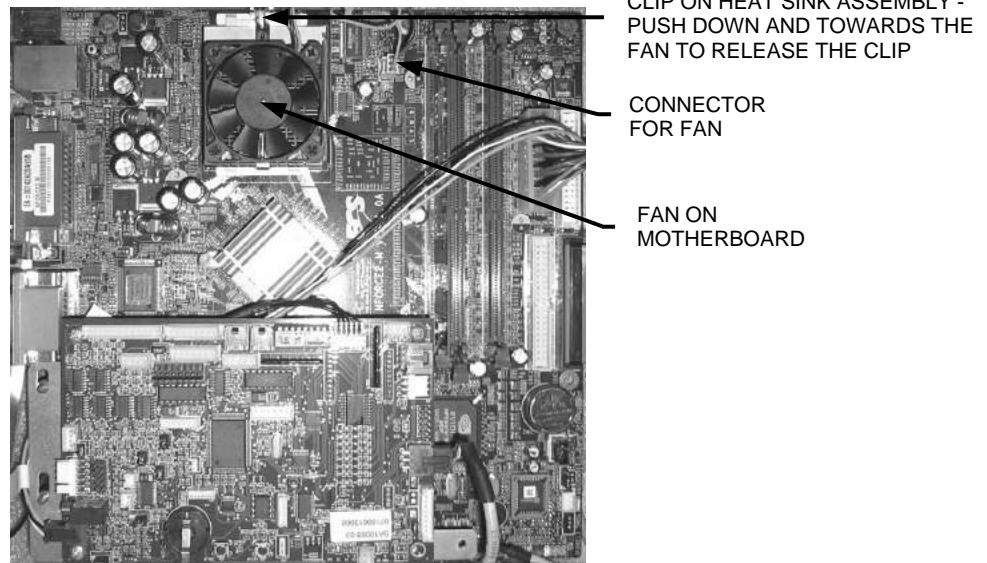


FIGURE 1 – ECS MOTHERBOARD AND I/O BOARD ASSEMBLY

4. Locate the metal clip securing the fan and carefully press the tab on the clip towards the motherboard to release it from the plastic catch to which it is secured. The clip should also disengage from the catch below the fan, allowing you to remove it.

NOTE: *Be extremely careful not to damage the plastic components securing the metal clips, as such damage would prohibit connection of the new heat sink and render the motherboard inoperative.*

5. Gently and carefully clean the top surface of the processor (see Figure 2) with the supplied alcohol wipe. Be careful to prevent contamination from spreading to other components. Don't spread grease to processor's edge. If necessary, remove any grease on processor's edge with the folded edge of the cleaning wipe.



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6. Remove the backing on the thermal compound located on the bottom of the supplied heat sink by pulling rapidly at a right angle to the base. A quick lifting motion is the best way to remove the tape. Once the tape is removed, immediately install the heat sink assembly making sure that no foreign material comes in contact with the thermal compound prior to installation.
7. Carefully position the new heat sink assembly in the proper orientation - the stepped portion fits over the top of the socket, where "SOCKET 462" is molded into the plastic (refer to Figure 2). Center it squarely over the retention frame, with the bottom of the heat sink nearly parallel to the top surface of the processor, and attach the heat sink clip (the side of the clip without the hook) to the plastic catches on the motherboard. Then, make sure the second clip is aligned with the plastic catches and very carefully, using a small, flat-head screwdriver on the hook, push downwards with a slight outward motion on the clip to secure it (see Figure 3).

CAUTION: When engaging the heat sink clip, never push down on the heat sink, all force should be applied only to the clip. Use extreme care when pressing down on the clip. If the tool slips off the clip, the motherboard can be damaged.

NOTE: If the heat sink is not secured squarely over the entire area of the processor, the game will automatically shut down shortly after booting up. If this occurs, remove and reattach the heat sink directly over the processor.

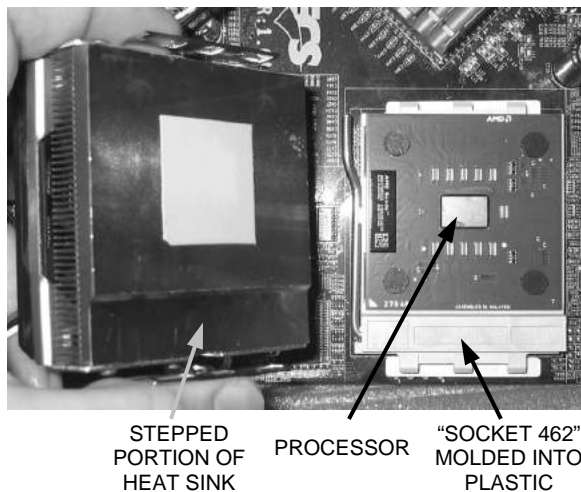


FIGURE 2 – RETENTION FRAME ON MOTHERBOARD

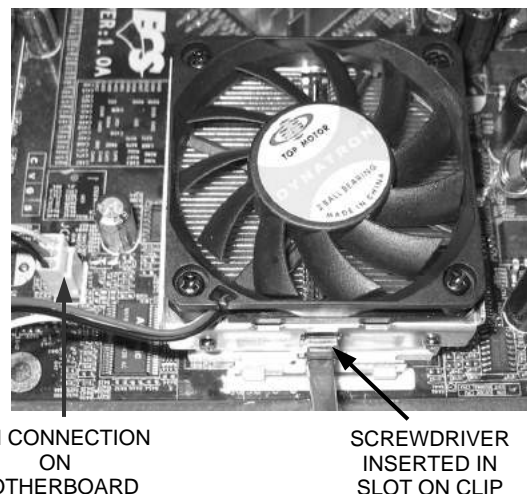


FIGURE 3 – HEAT SINK SECURED WITH SCREW DRIVER

8. Connect the 3-pin connector from the fan to the motherboard. See Figure 3.
9. Carefully inspect the heat sink to make sure it is correctly installed before starting the game. Then, plug in and turn on the game and make sure that the fan is turning at a rapid rate. If the fan isn't turning, power down the game to avoid damage. Then reseal the assembly so that it is properly aligned over the retention frame.
10. If you have a Fusion game, reinstall the electronics box cover and secure it with the 2 screws.
11. Close and lock the CPU section.