

COMPANY CONFIDENTIAL
WATERS CORPORATION
PCB REFURBISHMENT PROCEDURE

SYSTEM/ASSEMBLY/SUBASSEMBLY NAME: 2690

WATERS PART NUMBER AFFECTED: 800056370 RFB 2695 CPU PCB
Ref. 2695 CPU PCB – WAT056370

TEST EQUIPMENT NUMBER: IN CIRCUIT TE# 82548
FUNCTIONAL TE# 82557

TEST PROCEDURE NUMBER: 735000741

PCB REFURBISHMENT PROCEDURE DOCUMENT NUMBER: 735000749

WRITTEN BY: M. Brule DATE: 3-3-2003

APPROVED BY:

TEST ENGINEERING DATE:

ELECTRICAL ENGINEERING DATE:

REVISION HISTORY

<u>REV.</u>	<u>DWO/ECO</u> <u>NUMBER</u>	<u>DATE</u>	<u>ORIGINATOR</u>	<u>APPROVAL</u>	<u>DATE</u>
A	9013031	3-3-03	M. Brule		

UPGRADE PROCEDURE FOR ALLIANCE CPU BD. WAT056370.

1. UPDATE VERIFICATION

- 1.1. Verify the current P/N and revision of the PCB is capable of being updated. Refer to Waters Document Number 735000333.
- 1.2. If the PCB is not capable of update, hold the board for potential recovery of critical components upon request from Waters.

2. VISUAL INSPECTION

- 2.1 Inspect PCB for defects, which would render the board unusable; these include:
 - Scorched or burnt areas on the board
 - Major delaminated areas, blistering, or laminate
 - Broken corners
- 2.1. If the PCB is not capable of update, hold the board for potential recovery of critical components upon request from Waters.

3. REFURB PROCEDURE

NOTE: There was no rev 5 released.

REV 0:

- 3.1. Add a 100-ohm resistor (WAT106-10) in series with the 20 MHz clock at pin 17 of U38.
- 3.2. Add a 100-ohm resistor (WAT106-10) in series with the 24 MHz clock at pin 8 of U38.

These resistors should be placed as close to the pins of U38 as possible.
- 3.3. Remove P/N WAT290057 and replace with P/N 332000158 for each of the following reference designators U4, U6, U8, U19, U20, 22, U23, U24, U25, U35, U43, U44, U45, U56, U57 and U58.
- 3.4. Remove P/N WAT056354 and replace with P/N 332000160 for each of the following reference designators U5, U7, U36 and U41.
- 3.5. Solder a 332-ohm resistor (WAT106-14) from pin 11 of U19 to the adjacent side of R62.
- 3.6. Replace U13 with 361000202 and U14 with 361000203.
- 3.7. Replace R120 and R121 with WAT106-53.
- 3.8. Retest Bd. Repair as necessary until board successfully passes test.
- 3.9. Remark S/N label to Rev 9.
- 3.10. Add a new label with P/N 800056370 and date.

REV 1:

- 3.11. Remove P/N WAT290057 and replace with P/N 332000158 for each of the following reference designators U4, U6, U8, U19, U20, 22, U23, U24, U25, U35, U43, U44, U45, U56, U57 and U58.
- 3.12. Remove P/N WAT056354 and replace with P/N 332000160 for each of the following reference designators U5, U7, U36 and U41.
- 3.13. Solder a 332-ohm resistor (WAT106-14) from pin 11 of U19 to the adjacent side of R62.
- 3.14. Replace U13 with 361000202 and U14 with 361000203.
- 3.15. Replace R120 and R121 with WAT106-53.
- 3.16. Retest and change Rev to 9.

REV 2 OR 3:

- 3.17. Solder a 332-ohm resistor (WAT106-14) from pin 11 of U19 to the adjacent side of R62.
- 3.18. Replace U13 with 361000202 and U14 with 361000203.
- 3.19. Replace R120 and R121 with WAT106-53.
- 3.20. Retest and change Rev to 9.

REV 4, 6 OR 7:

- 3.21. Replace U13 with 361000202 and U14 with 361000203.
- 3.22. Replace R120 and R121 with WAT106-53.
- 3.23. Retest and change Rev to 9.

REV 8:

- 3.24. Replace R120 and R121 with WAT106-53.
- 3.25. Retest and change Rev to 9.

4. CRITICAL COMPONENT RECOVERY

None.