

MODIFICATION RECOMMENDED –
CORRECTS MANUFACTURING OR DESIGN DEFECTS

5517C-05B

S E R V I C E N O T E

Supersedes: 5517C-05A

5517C and 5517CN05 Laser Heads

**Serial Numbers: 5517C US44100101 / US44100453
5517CN05 US44360101 / US44360220**

Controller Board A3F1 Nuisance blows

To Be Performed By: Agilent-Qualified Personnel or Customer

Parts Required:

P/N 05517-67008 Description Fuse Kit Qty. 1

Fuse Agilent part Number 2110-1381

Label Agilent Part Number N.A.

ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION:			
MODIFICATION RECOMMENDED			
ACTION CATEGORY:	X Agreeable Time	STANDARDS:	LABOR: 1.0 Hours
LOCATION CATEGORY:	X CUSTOMER INSTALLABLE	SERVICE INVENTORY:	X SCRAP
	X SERVICE CENTER	USED PARTS:	X SCRAP
AVAILABILITY:	PRODUCT'S SUPPORT LIFE	AGILENT RESPONSIBLE UNTIL: September 2008	
AUTHOR: JWE	PRODUCT LINE: PL 45		
ADDITIONAL INFORMATION:			

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Situation:**Problem:**

Agilent has identified some applications in which there is nuisance blows of the fuse (A3F1) on the laser controller board (05517-60031). This is a secondary fuse; the main fuses are not affected.

The observed mechanism is: READY light not illuminated, other three LEDs are illuminated. Laser does not progress through a normal power-up-and-ON operating sequence.

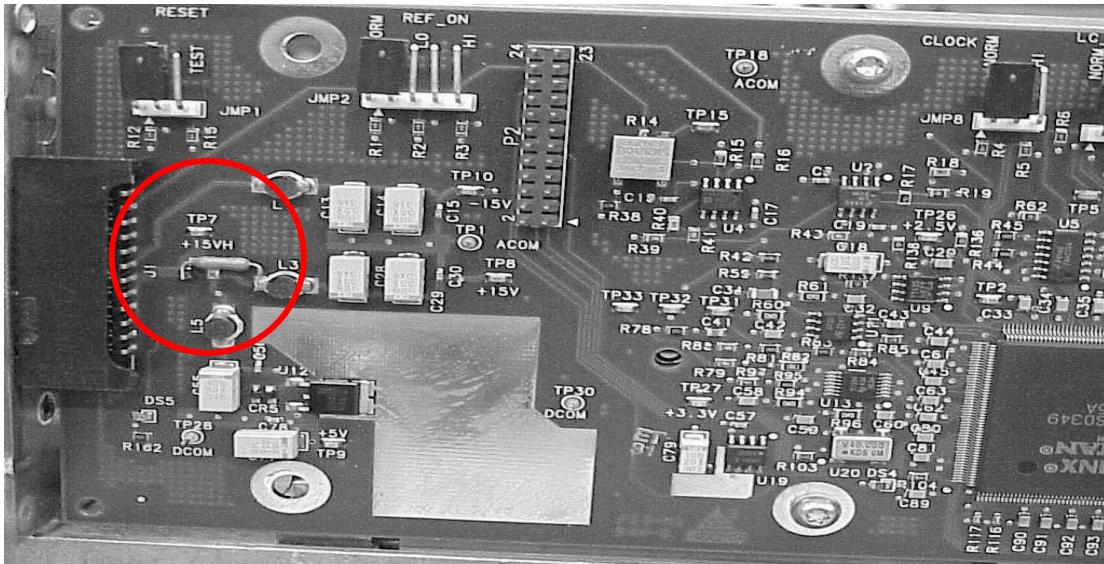
Root Cause:

Nuisance fuse blowing is sometimes seen when the laser head is operated in a high temperature environment with limited to no air circulation around the unit. This condition causes very high temperatures inside the laser, greatly reducing the operating margin for the fuse.

In some applications, customers have elevated the ambient temperature surrounding Agilent's Laser Heads. In some cases, customers have added a cover over the Laser Head in which the ambient temperature raises, or they have restricted the airflow around the Laser Head. Both of these cases have lead to the nuisance blows of the fuse on the laser controller board.

Solution/Action:

We recommend that you remove the 0.5A surface mount fuse and replace it with a 0.63A through hole fuse (see picture below). In order to do this, bend the leads on the fuse to be able to attach the through hole fuse from the left fuse pad to L3. Then solder the fuse in place. After replacing the fuse the laser head needs to be powered up to ensure the unit is working. Additional test are optical power and split frequency tests. No adjustments are needed. Also, to identify laser heads that have had the fuse replaced, we recommend a label be placed on the rear panel (see picture below).



Picture shows the 0.63A TH fuse installed.



Picture shows placement of label.