

MODIFICATION RECOMMENDED –  
CORRECTS MANUFACTURING OR DESIGN DEFECTS

**5517D-05B**

**S E R V I C E N O T E**

Supersedes: 5517D-05A

5517D, 5517D-C19, 5517DN06, N07 and N13 Laser Heads

**Serial Numbers:** 5517D US44100101 / US44100143  
5517D-C19 US44100101 / US44100286  
5517DN06 US43260150 / US43260248  
5517DN07 US43260150 / US43260337  
5517DN13 US43260150 / US43260226

**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:			
<b>MODIFICATION RECOMMENDED</b>			
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.

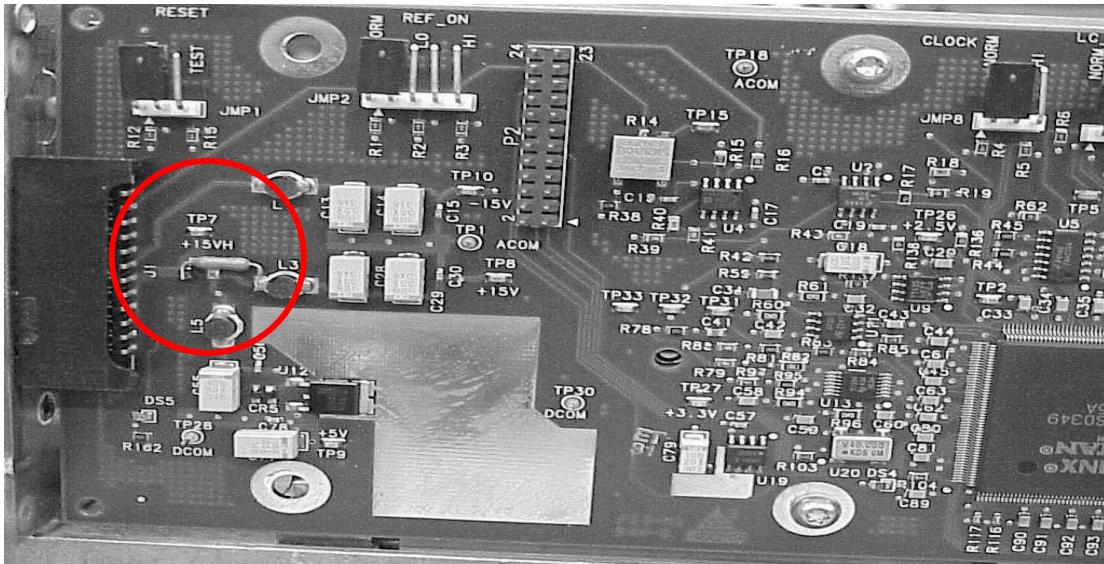
**Root Cause:**

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.