

3561A-10

S E R V I C E N O T E

SUPERSEDES: None

HP 3561A Dynamic Signal Analyzer

Serial Numbers: 0000A00000 / 2844A05507 (start of new prefix)

A91 Replaces A90 - Requiring A99 Modification

Parts Required:

Ref Desg	HP P/N	Description
A99Q1	1855-0767	transistor- flyback switching
CR1	1901-1199	diode
CR2	1901-1199	diode
C11	0160-3454	cap 220pf 1000v
R5	0683-4745	r-f 470k
R6	8159-0005	r-f 0 ohms
MP1	0515-1451	screw
MP2	0380-0345	spacer
MP3	0535-0031	nut

Continued

DATE: January 1996

ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION:

INFORMATION ONLY

AUTHOR:

ENTITY:

ADDITIONAL INFORMATION:

DAA

A100

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Situation:

The HP 3561A has undergone the following changes:

1. A new Flyback Transformer A99T100 (9100-4638) replaced the old transformer (9100-4341), requiring a redesign of the A99 motherboard to Rev.C.
2. The A90 analog display driver board (03561-66590) was replaced by the A91 board (03561-66591) for compatibility with the new A99Q1 transistor (1855-0767).
3. The A99 motherboard (03561-66599 Rev C) had to be modified to be compatible with the new A91 board.

The new flyback transformer (9100-4638) replaced the older red-body flyback transformer (9100-4341). The A99 motherboard had to be re-designed (to Rev.C) to accommodate the new transformer. There is a VERY LIMITED SUPPLY of 9100-4341 left in support stock.

The A90 display driver board had to be redesigned to support the use of a new A99Q1 fly-back switching transistor (1855-0767). The old A99Q1 transistor experienced ongoing quality defects and had to be replaced with a more reliable part.

The A99 motherboard (Rev.C) required minor modification to operate with the new A99Q1 transistor. Therefore, there are three existing versions of the A99 motherboard:

1. A99 Rev.A & B (no longer available)
2. A99 Rev.C 'unmodified' (no longer available)
3. A99 Rev.C 'modified'(currently available)

Solution/Action**Repair strategies and compatibility information**

The following is a list of repair procedures linked to serial number ranges:

3561A SERIAL# RANGE	3561A CONTENTS/REPAIR PROCEDURES
2338A00100 / 2735A04437	A99 Rev.A & B motherboard A99T100 (9100-4341 red body) A99Q1 (03561-82501) (same as 1854-0780) A90 display driver board NOTE: To replace A90, order A91 (03561-66591) and A99 (03561-66599). To replace A99 Rev.A or B, order A99 and A91. (A99 Rev.A,B cannot be modified).
2735A04438 / 2735A05506	A99 Rev.C (unmodified) motherboard A99T100 (9100-4638 black body) A99Q1 (03561-82501) (same as 1854-0780) A90 display driver board NOTE: To replace A90, order A91 and modify A99 Rev.C. (mod procedure is located in this service note). To replace A99, order A99 and A91.

2844A05507 / 2945A08196 A99 Rev.C (modified) motherboard
 A99T100 (9100-4638 black body)
 A99Q1 (1855-0767)
 A91 display driver board

NOTE: To replace A99, order A99
 To replace A91, order A91

Identification of the TWO EXISTING VERSIONS of the A99 Rev C board:

- * A99 Rev.C UN-MODIFIED.: serial prefix 2735A and below.
- * A99 Rev.C MODIFIED.....: serial prefix 2844A and above.

UN-MODIFIED: A99Q1 has a T0-3 case (round metal)
 A99Q1 mfg p/n is BUS-12A
 A99Q1 HP p/n is 1854-0780 (same as
 (03561-82501)

MODIFIED: A99Q1 has a T0-218AC case (square plastic)
 A99Q1 mfg p/n is MTH8N60
 A99Q1 HP p/n is 1855-0767

A99 Rev.C (03561-66599) Modification procedure

Parts Needed: see above

1. Install the new Q1 (1855-0767)
 - 1.1. Remove the old 01
 - 1.2. Remove and discard Q1 heatsink
 - 1.3. Perform the new Q1: cut off middle lead bend back two outer leads 110 deg.
 (don't make bends too close to package)
 - 1.4. Mount Q1 using MP1,2,3: screw goes through board from circuit side via hole marked "C" near J1; spacer placed over screw, followed by tab of Q1; follow with nut. Leads of Q1 go into holes "B" and "E". Tighten nut, then solder leads.
2. Remove and discard R1, C1, R4 and T1.
3. Replace old CR1 and CR2 with new diodes.
4. Install C11
5. Install R6 in old T1 pin 1 and pin 4 holes.
6. Install R5 in old T1 pin 1 and pin 5 holes. (pin 1 hole is large enough for two leads).