

Service Manual

ViewSonic VP2290b-3

Model No. VLCDS24728-3W

Digital LCD Display

(VP2290b-3_SM_891 Rev. 1a June 2004)

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Revision History

Revision	Date	Description Of Changes	Approval
1a	06/11/04	Initial Release DCN-4529	Angela Lu

Assembly (Dis-Assy) Procedure
For
VIEWSONIC VP2290b MONITOR

1. Purpose

The purpose of this procedure is to ensure that all Liquid Crystal Display (LCD) repair processes adhere to the specifications set forth in Incline's *LCD Repair Process Manual*, document number 11010.

2. Scope:

This document delineates the generic repair processes for flat panel display. Other processes not specifically mentioned in this procedure are subject to the processes and methods delineated in the *LCD Repair Process Manual* 11010.

3. Responsibility:

It is the responsibility of the Engineering Department to maintain this procedure.

4. Reference Documents:

LCD Test Process 11010
Corrective Action Request (CAR) Form #11192
Incline LCD Traveler Form No. 11043-001

5. Tools Required:

Philips screwdriver, #1
Power screwdriver (adjustable torque)
Tweezers
Tube tool (Hose)
Cotton gloves
Protective mylar film (12.5" wide)
Black ESD carrier (18" x 24")
Foam cushion for carrier (approx. 12" x 20")
Protective foam for workbench (approx. 12" x 20")
Large ESD workstation

6. Areas Affected:

Employ this procedure in all operational repair areas of Incline Corporation.

7. Document Retention Period:

Retain this document for 12 months after it has been declared obsolete.

Assembly (Dis-Assy) Procedure

For

VIEWSONIC VP2290b MONITOR

8. STANDARDS AND PRECAUTIONS

LCD panels are very delicate electronic instruments and need to be handled with great care at all times during all phases of the repair process. Below is a list of some of the DOs and DON'Ts when handling LCD panels of any kind.

8.1 ESD

Before opening a LCD assembly, ensure that you are at an ESD compliant workstation with your ESD wrist strap attached. Wear gloves or finger cots to protect the LCD from fingerprints as much as possible. Keep the workstation free of debris.

8.2 Contamination/Damage Avoidance

Avoid putting pressure on the plastic film covering the LCD as it can easily be damaged. Never allow the front or rear Polarizer to come into direct contact with the bench top or granite work area as this may scratch the Polarizer. Use a clean cloth to protect the surface of the LCD. Ensure that all screws are immediately placed in a container after removal from the LCD. Care should be taken with broken glass both for the safety of the operator and the LCD Polarizer. After a LCD with a broken glass panel or Backlight is discovered and processed, the workspace should be swept with a rag to remove any small bits of glass.

8.3 Product Tracking

Incline has developed a custom MIS program known as FAST (Facility Automated Serial Tracking) to track and disposition all products. WIP (Work In Process) stations are located throughout the facility to allow for convenient access to FAST. Always fill out both the paper traveler and the WIP screen as accurately as possible. When moving the LCD between locations update the location on the WIP screen. Throughout this entire procedure, references are made to the LCD Matrix. The Matrix lists all of the specific tooling and setups required for each LCD. Key elements of the Matrix are also accessed through the WIP screen.

8.4 Miscellaneous

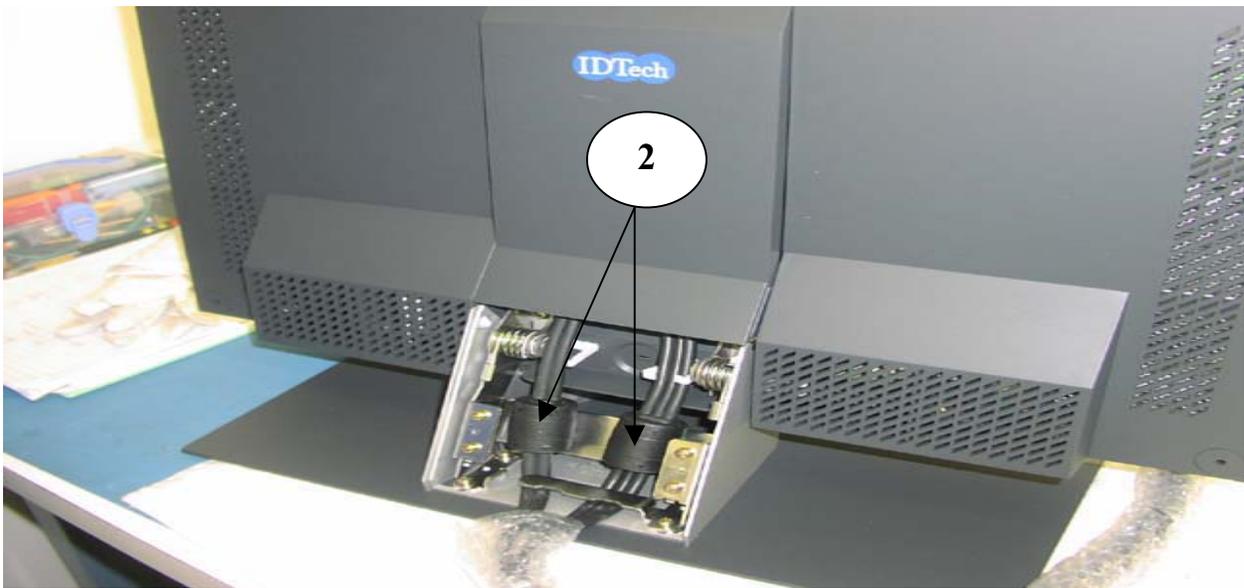
1. *Always use ESD protection devices, such as a grounded workstation and wrist strap, when handling LCD panels.*
2. *When handling LCDs where tabs are mounted to PCBs which flex and can potentially make contact with the polarized panel surfaces (both inside and outside polarizers) ensure that there is always a protective sheet between the PCB and the polarizer surfaces.*
3. *Always use an air gun to clear particles from illuminator surfaces. Never use a clean wipe. Do not touch the illuminator surfaces with your fingers; skin oils leave a mark that is very difficult to remove without damaging the illuminator.*

Assembly (Dis-Assy) Procedure
For
VIEWSONIC VP2290b MONITOR

9. Procedure: *INSTRUCTIONS FOR DIS-ASSEMBLY*



Situate monitor on workbench in preparation for removal of two (2) rear panels (Item 1)



Disengage latch from bottom panel and remove panel to gain access to two (2) cables (Item 2).

Assembly (Dis-Assy) Procedure
For
VIEWSONIC VP2290b MONITOR

DIS-ASSEMBLY



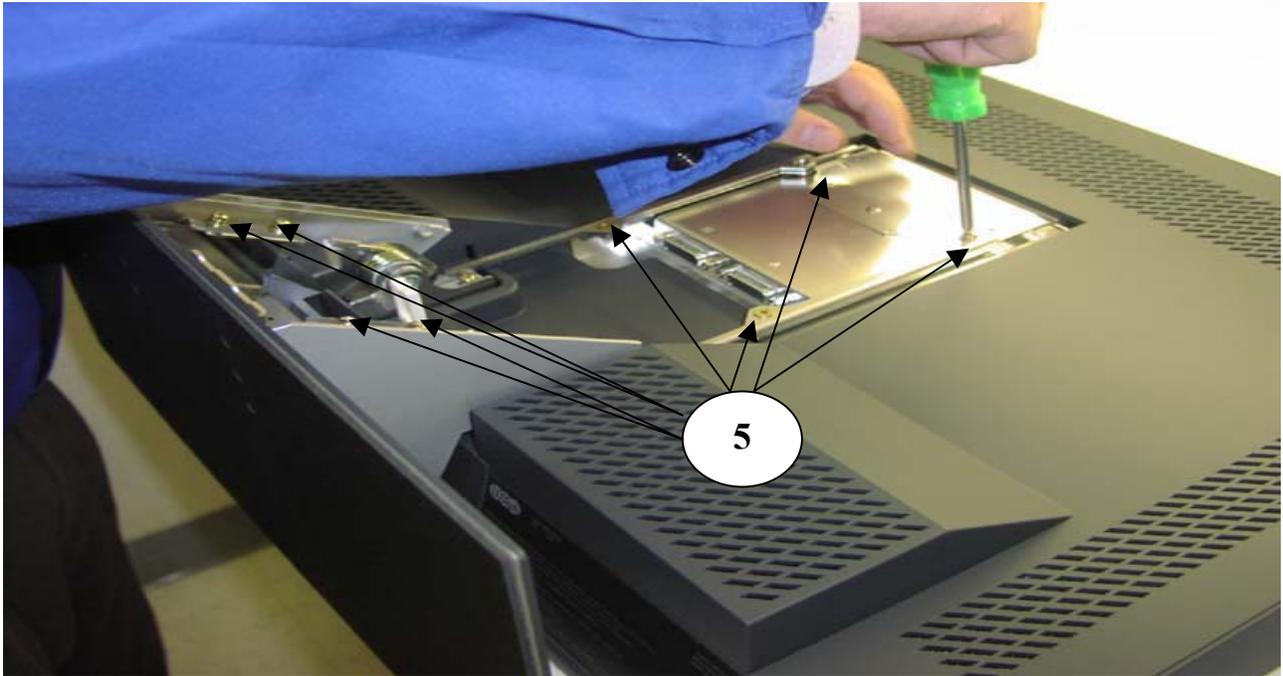
After second panel is removed, use a tube (Item 3) to loosen the four (4) connector mounting screws.



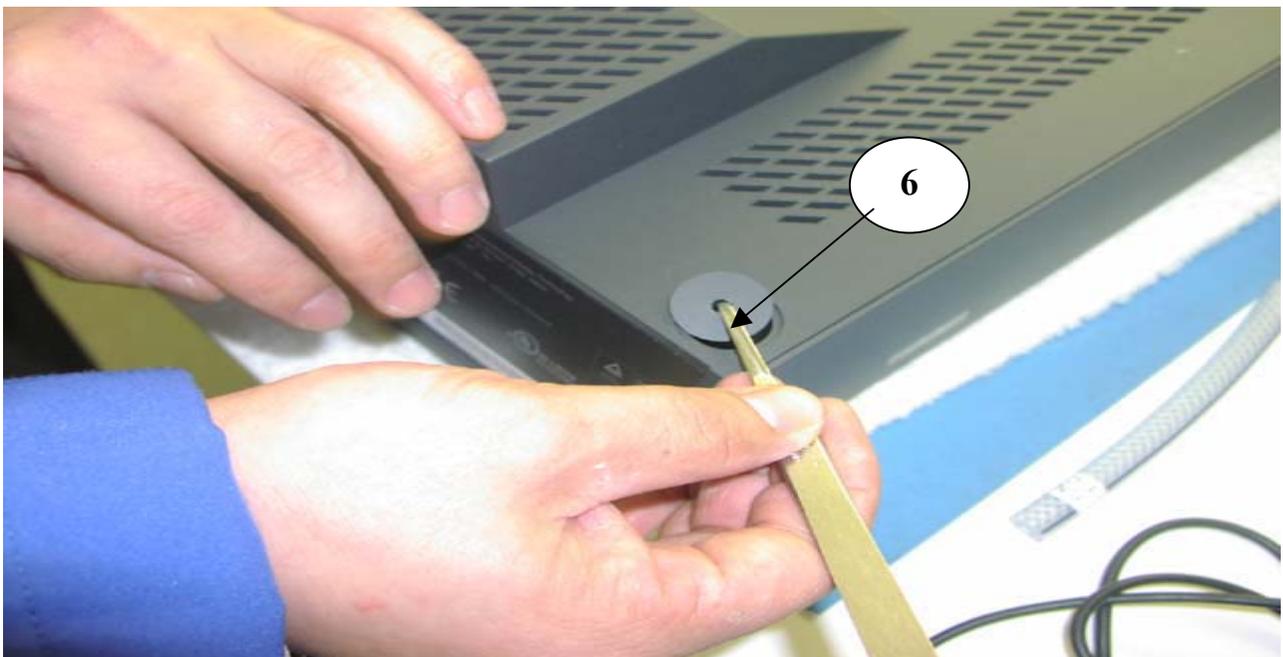
Once both cables are removed from the monitor, lay monitor on bench with screen surface down (protected by foam- Item 4) in preparation for removal of base (Item 4A).

Assembly (Dis-Assy) Procedure
For
VIEWSONIC VP2290b MONITOR

DIS-ASSEMBLY



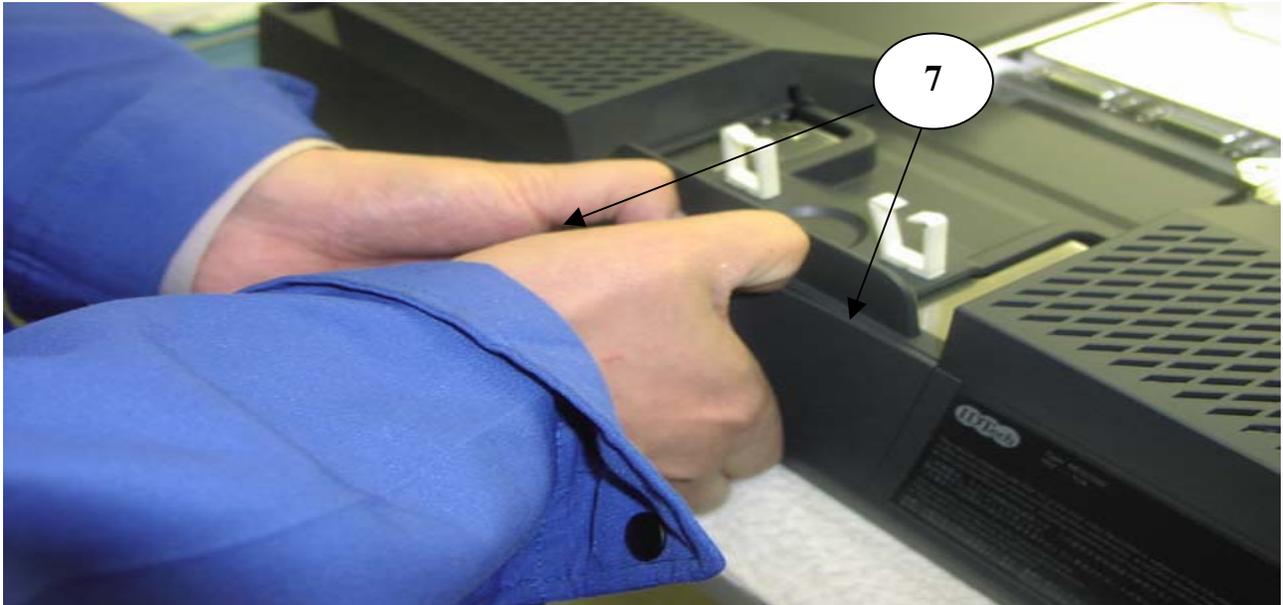
Remove eight (8) screws (Item 5) that secure monitor base. Lift and remove base from monitor.



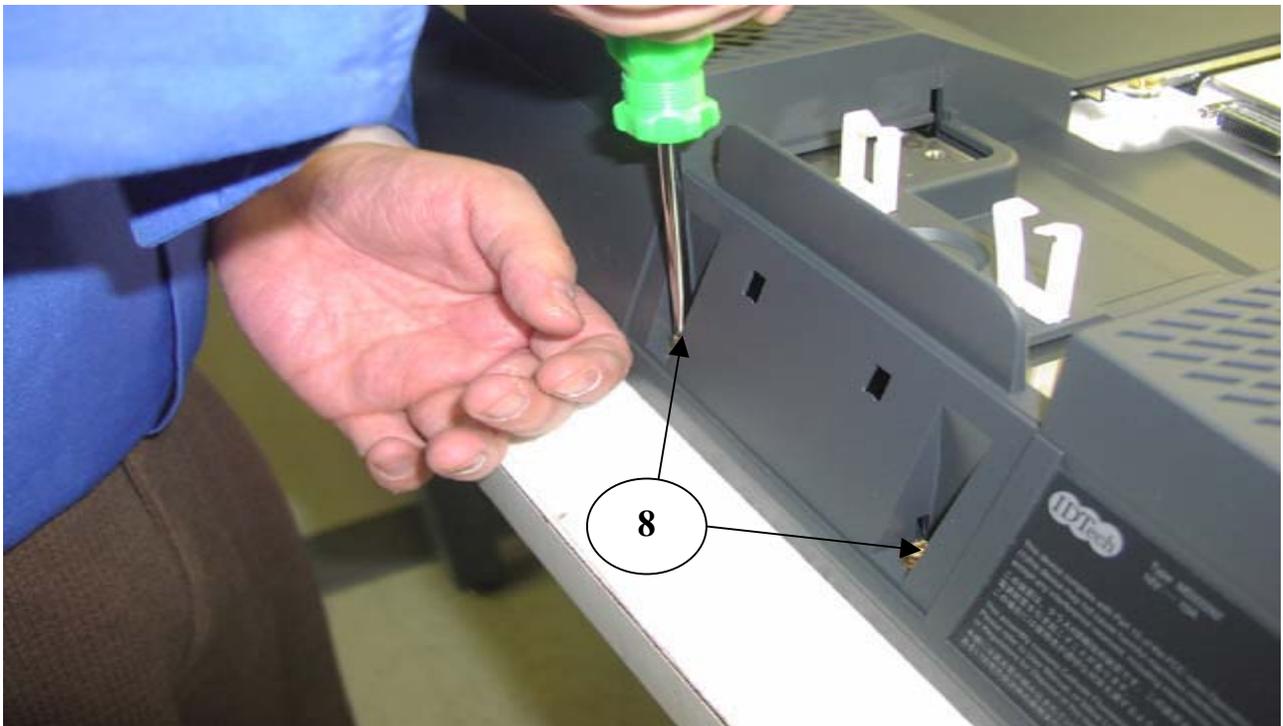
Using tweezers, remove screw covers (Item 6), a total of four (4), one in each corner. Proceed to remove four (4) screws.

Assembly (Dis-Assy) Procedure
For
VIEWSONIC VP2290b MONITOR

DIS-ASSEMBLY



Grasp and unsnap panel (Item 7) that is located on monitor bottom, beneath where base was previously located.



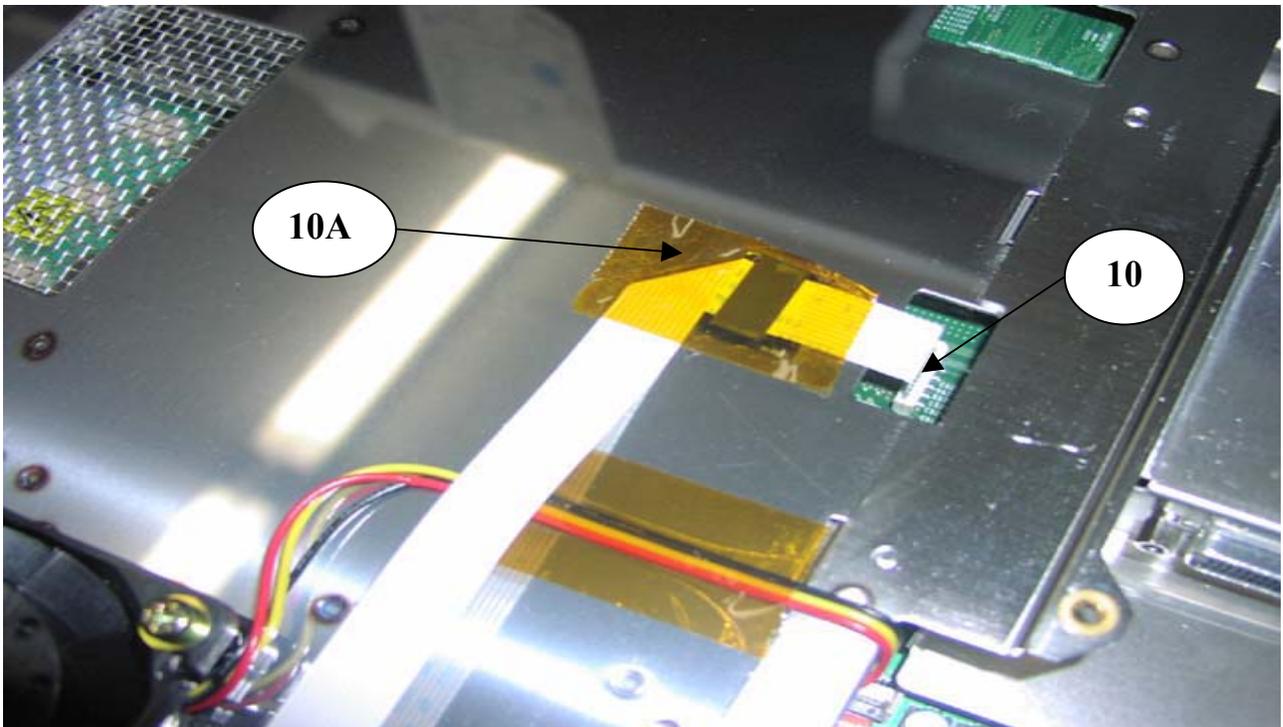
Remove two (2) screws (Item 8) that can now be accessed.

Assembly (Dis-Assy) Procedure
For
VIEWSONIC VP2290b MONITOR

DIS-ASSEMBLY



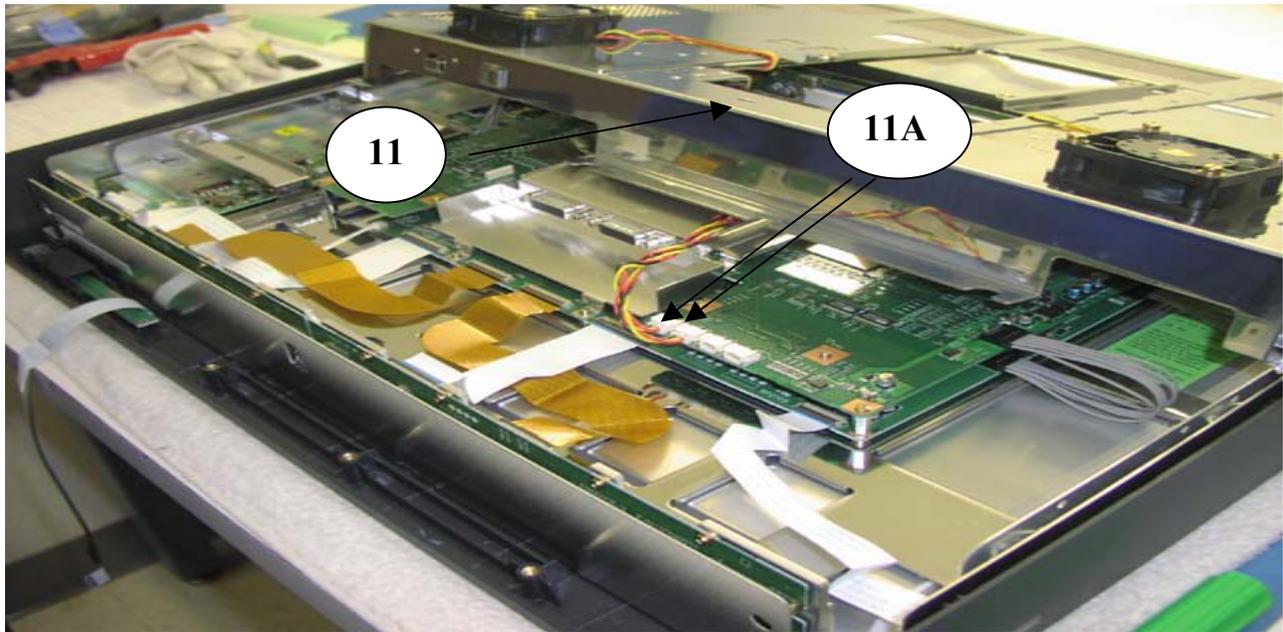
Grasp and unsnap rear housing (Item 9) by lifting until completely separated from monitor.



Remove ribbon cable from connector (Item 10). Peel back tape (Item 10A) to disengage cable from metal backbone.

Assembly (Dis-Assy) Procedure
For
VIEWSONIC VP2290b MONITOR

DIS-ASSEMBLY



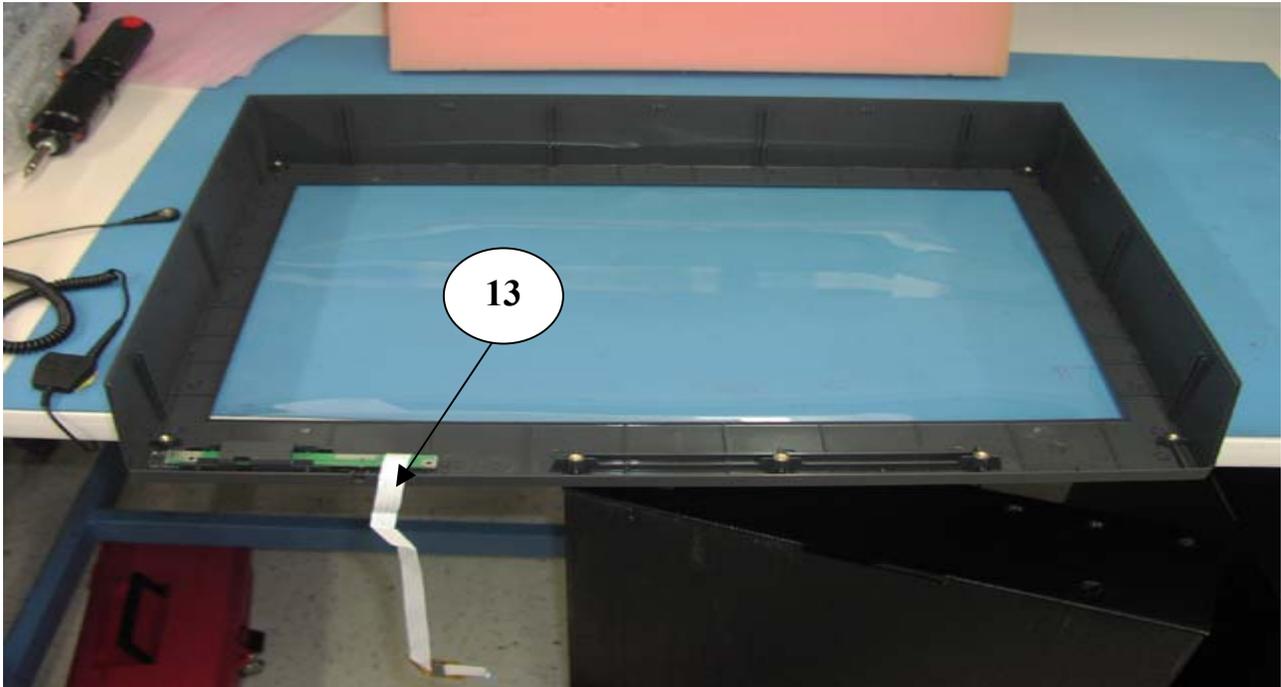
Lift metal backbone (Item 11) and slide toward top of module to enable access to the two (2) fan cables (Item 11A). Disconnect the two cables and note their corresponding mating connectors. Once cables are free, remove metal backbone completely from monitor.



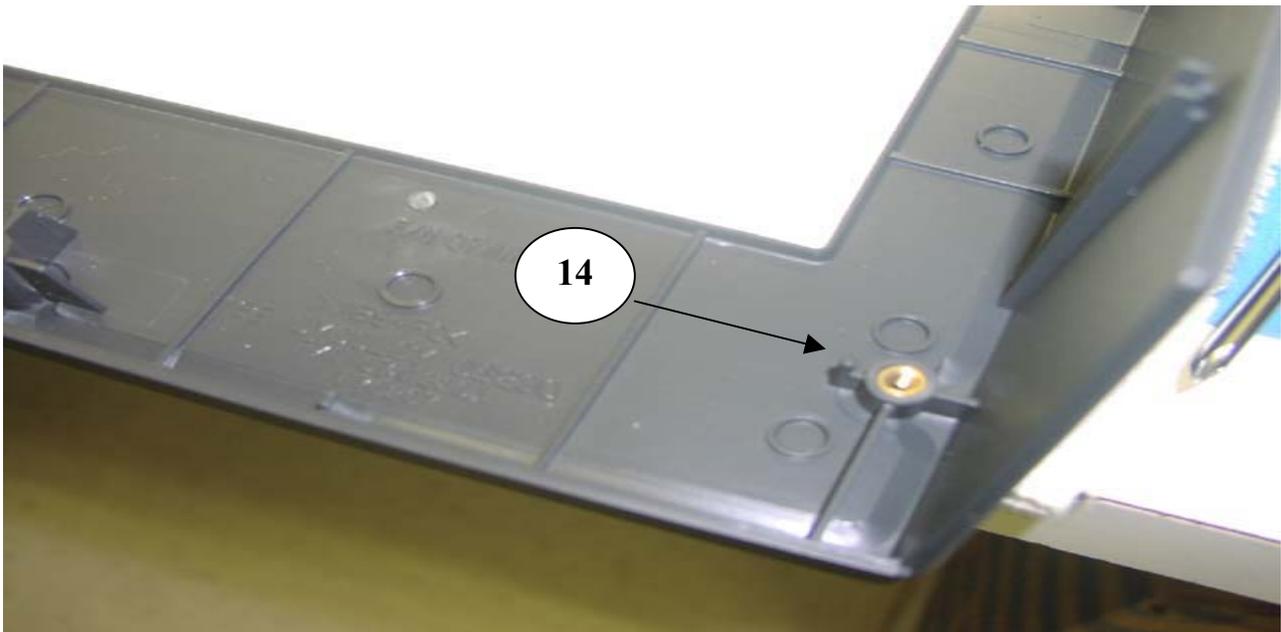
Lift and separate LCD module (Item 12) from monitor bezel (Item 12A).

Assembly (Dis-Assy) Procedure
For
VIEWSONIC VP2290b MONITOR

DIS-ASSEMBLY



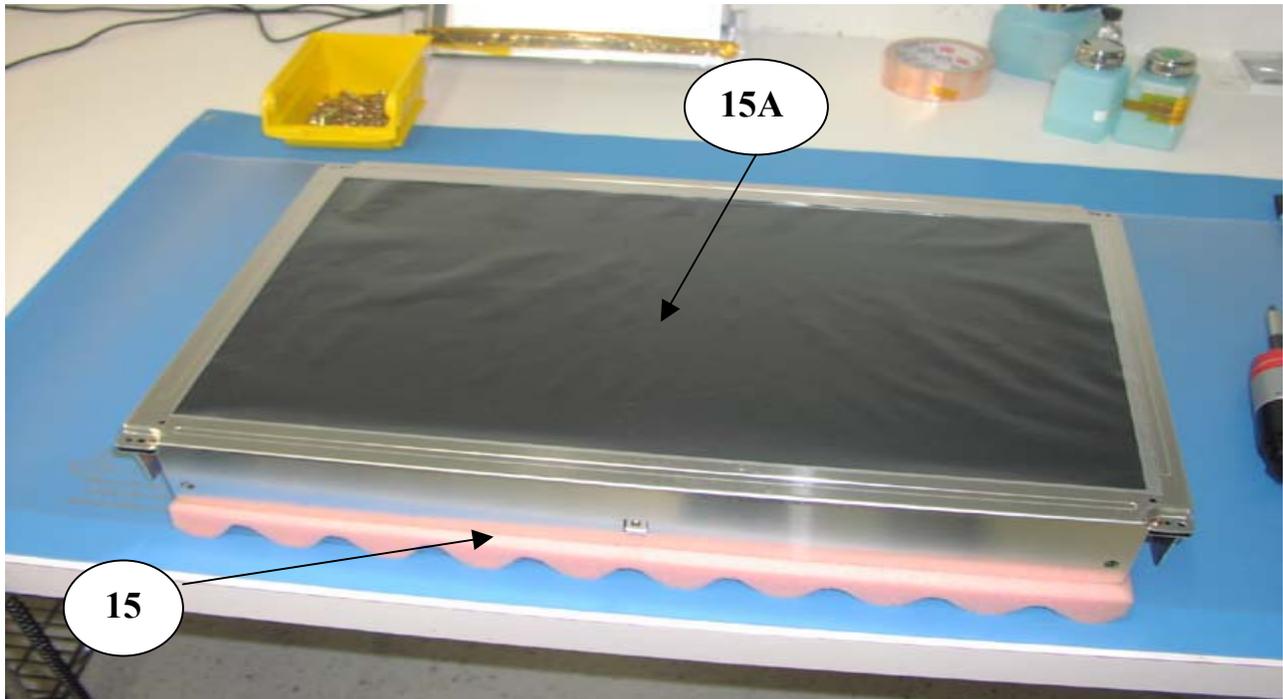
Lay bezel on bench to inspect for any damage; pay particular attention to function cable (Item 13).



Inspect four (4) guide pins in bezel (one pin in each corner- Item 14) for damage.

Assembly (Dis-Assy) Procedure
For
VIEWSONIC VP2290b MONITOR

DIS-ASSEMBLY



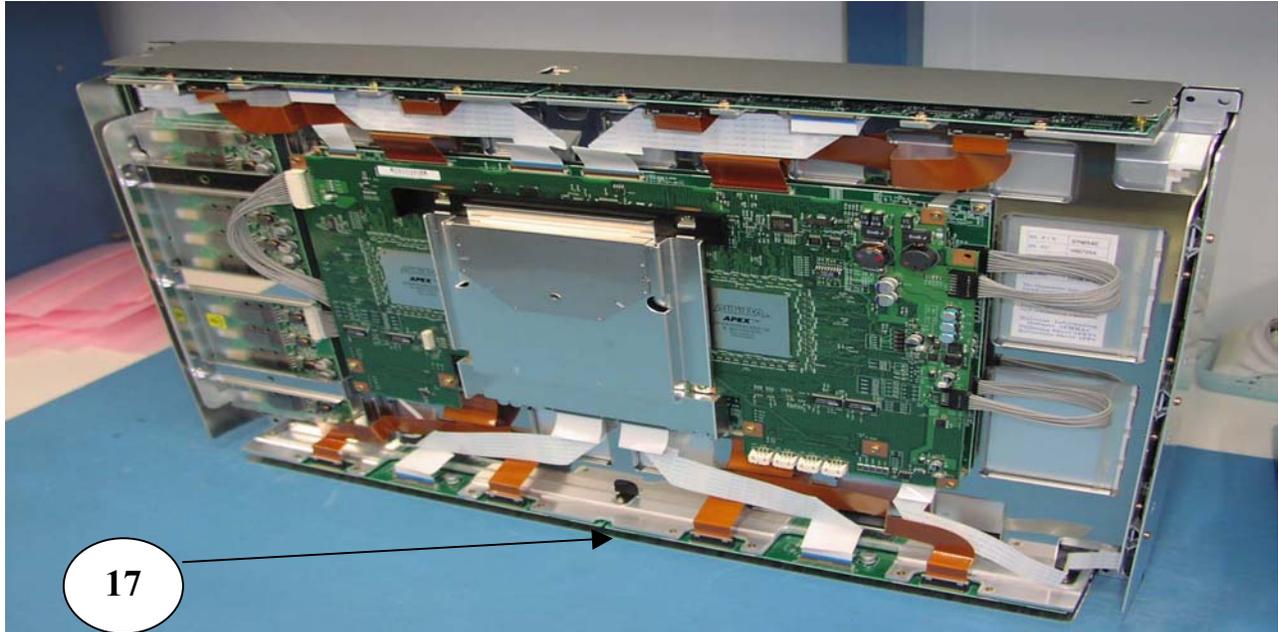
Situate LCD module onto foam cushion (Item 15) to protect underlying PCBs. Install protective mylar film onto front polarizer (Item 15A).



If LCD module (IPN F8991) is to be transported to another work area, use carrier (Item 16).
If LCD module is to be disassembled at same work bench, refer to “Assembly (Dis-Assy) Procedure for VIEWSONIC F8991 MODULE” document.

Assembly (Dis-Assy) Procedure
For
VIEWSONIC VP2290b MONITOR

INSTRUCTIONS FOR ASSEMBLY



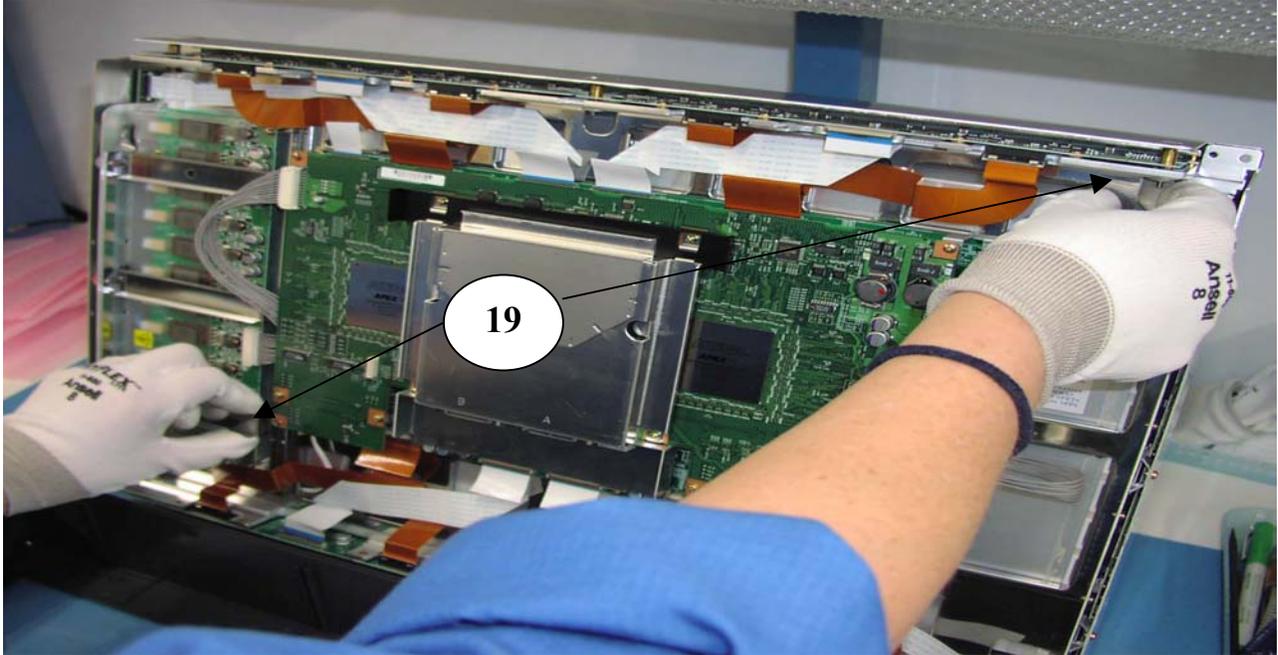
After removing mylar from front polarizer, situate panel assembly (IPN F8991) on edge (Item 17) in preparation for installation into bezel.



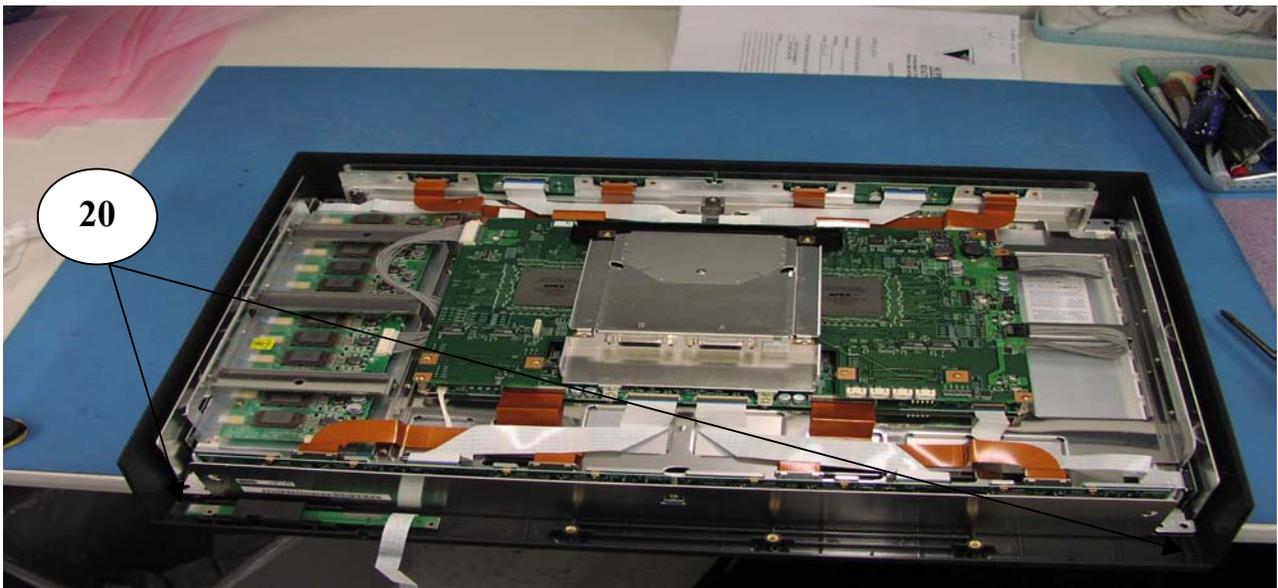
Situate bezel (Item 18) in front of panel. Place the bottom of bezel (with cable- Item 18A) off the table edge to protect the underlying function control buttons.

Assembly (Dis-Assy) Procedure
For
VIEWSONIC VP2290b MONITOR

ASSEMBLY



Grasp the panel by the metal arms (Item 19) in order to lift and position into bezel.



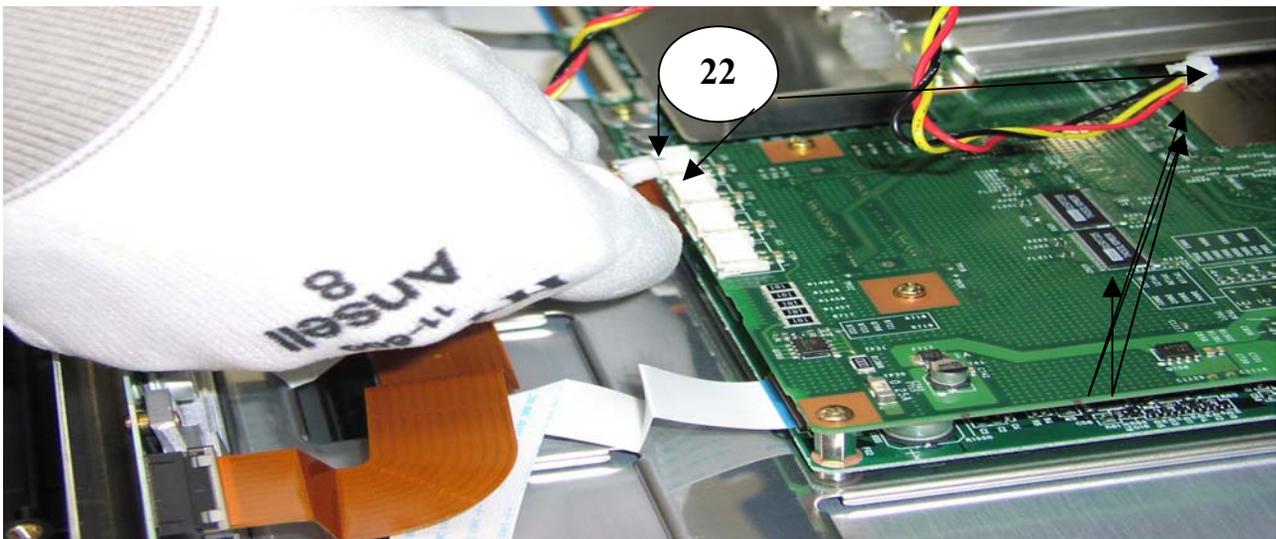
Carefully lower panel into bezel (Item 20), ensuring the panel drops into the bezel guide pins.

Assembly (Dis-Assy) Procedure
For
VIEWSONIC VP2290b MONITOR

ASSEMBLY



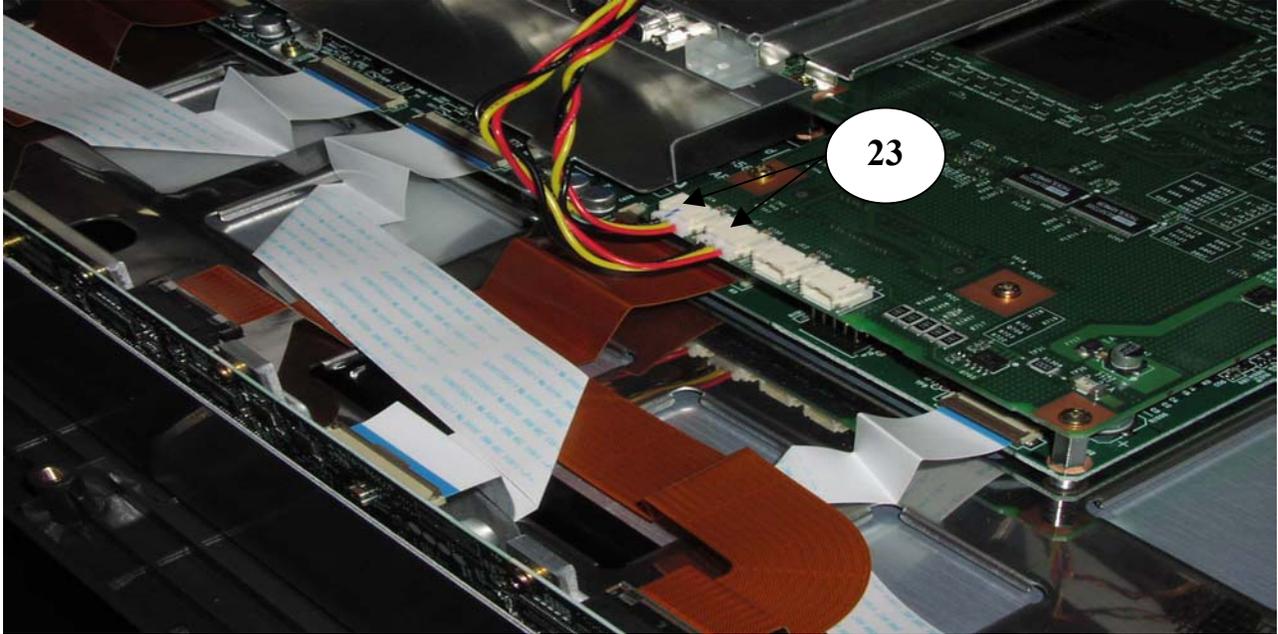
Situate metal backbone (Item 21) over panel and lower onto panel, enough to connect the two (2) fan cables (Item 21A).



Connect two (2) fan cables into the original connector mates on the PCB (Item 22). Do not mix.

Assembly (Dis-Assy) Procedure
For
VIEWSONIC VP2290b MONITOR

ASSEMBLY



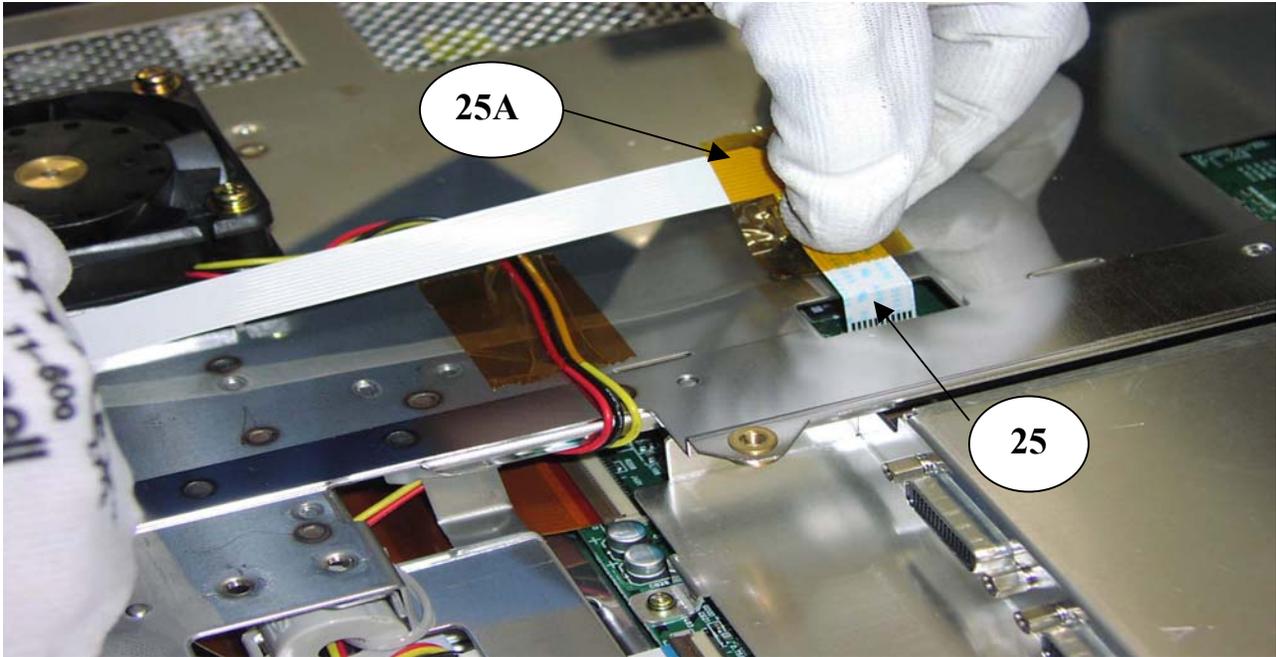
Ensure both fan cables are securely seated and in their original connector positions (Item 23).



Lower backbone fully into the bezel, ensuring backbone is properly seated (Item 24).

Assembly (Dis-Assy) Procedure
For
VIEWSONIC VP2290b MONITOR

ASSEMBLY



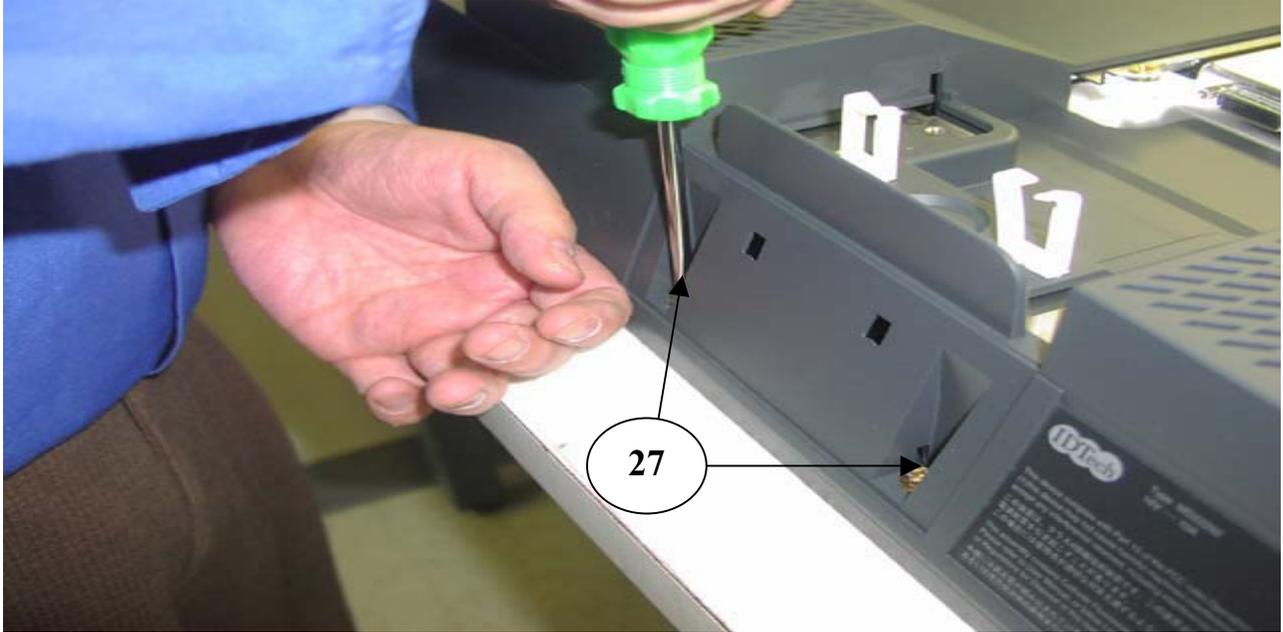
Insert control cable into connector (Item 25) and restick tape (Item 25A).



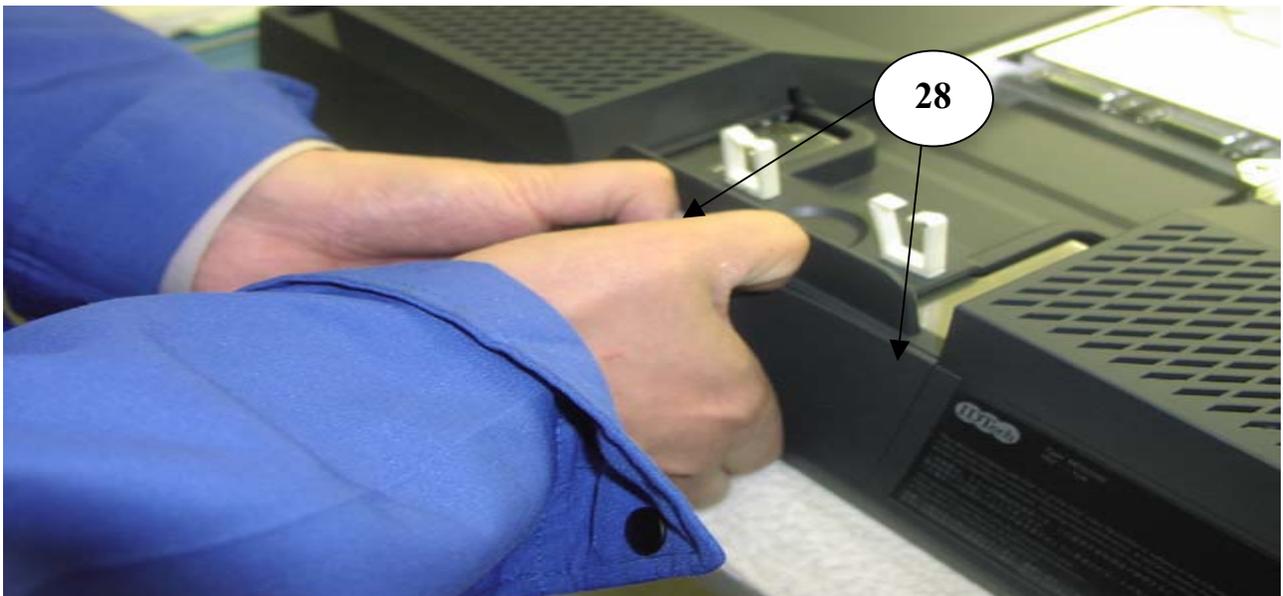
Place back cover (Item 26) onto panel assembly, ensuring cover is fully seated.

Assembly (Dis-Assy) Procedure
For
VIEWSONIC VP2290b MONITOR

ASSEMBLY



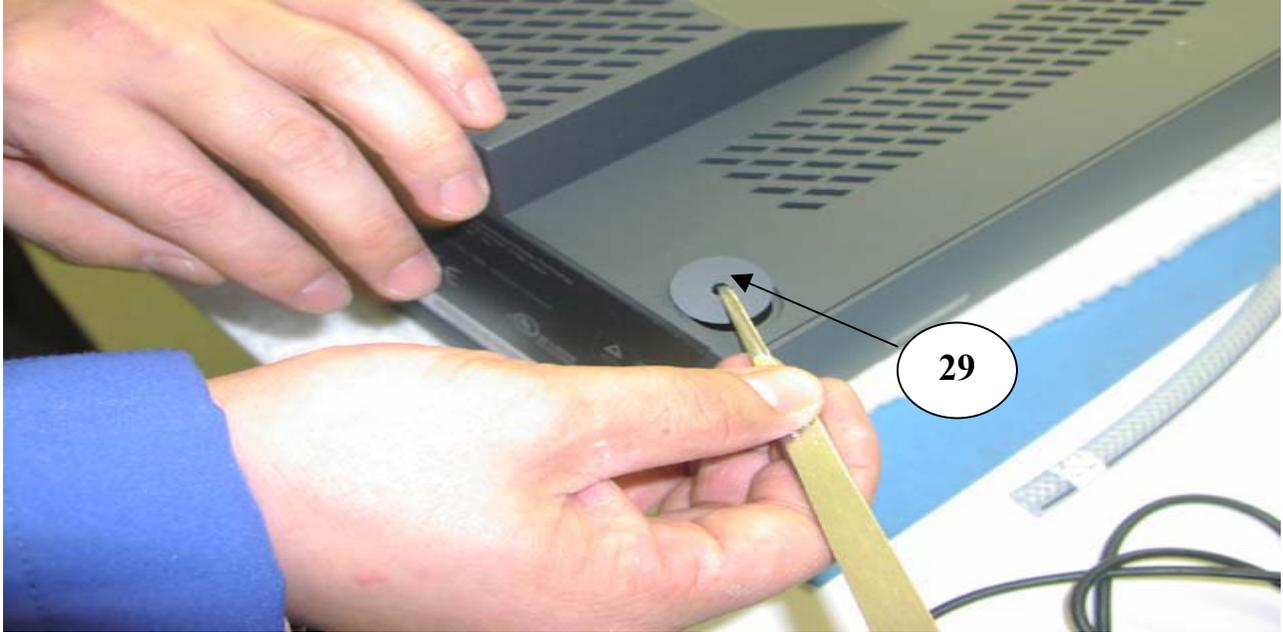
Insert two (2) screws (Item 27) into bottom of monitor.



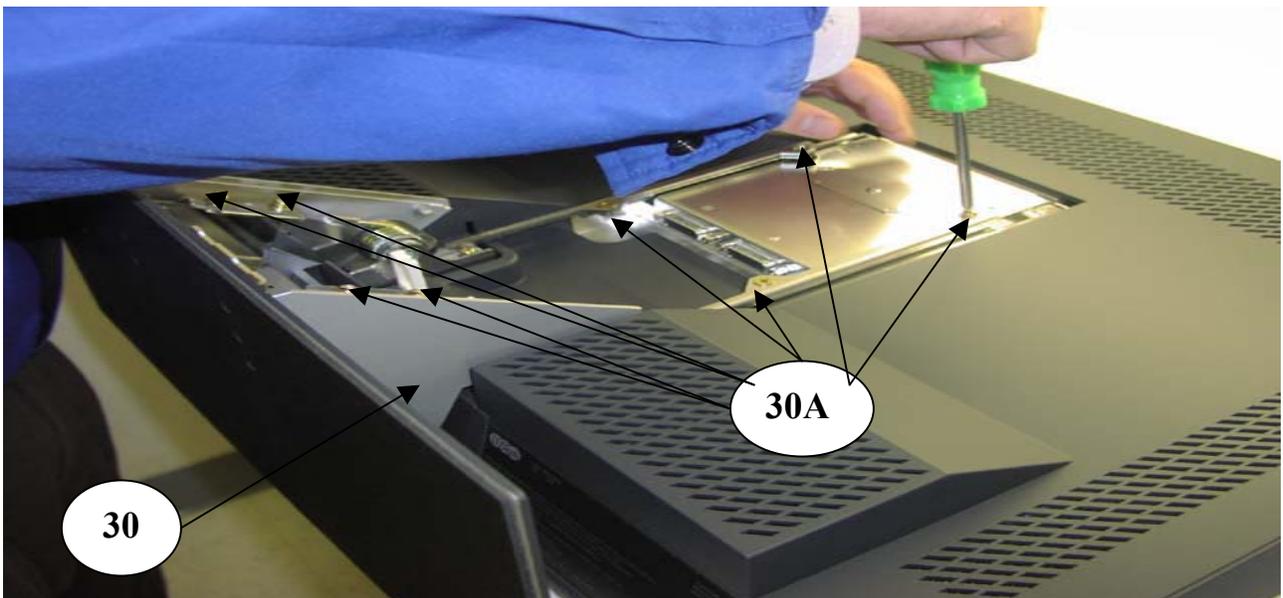
Grasp and install cover panel (Item 28) by snapping into position.

Assembly (Dis-Assy) Procedure
For
VIEWSONIC VP2290b MONITOR

ASSEMBLY



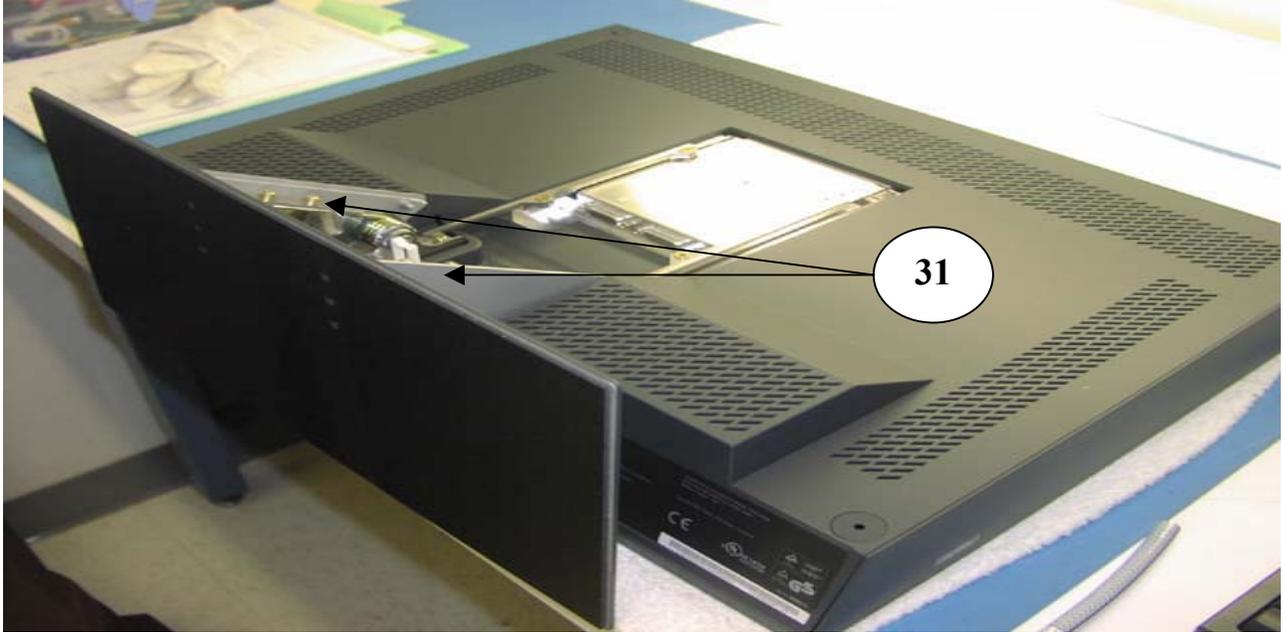
Insert four (4) screws into the rear cover, one in each corner. Replace screw covers (Item 29).



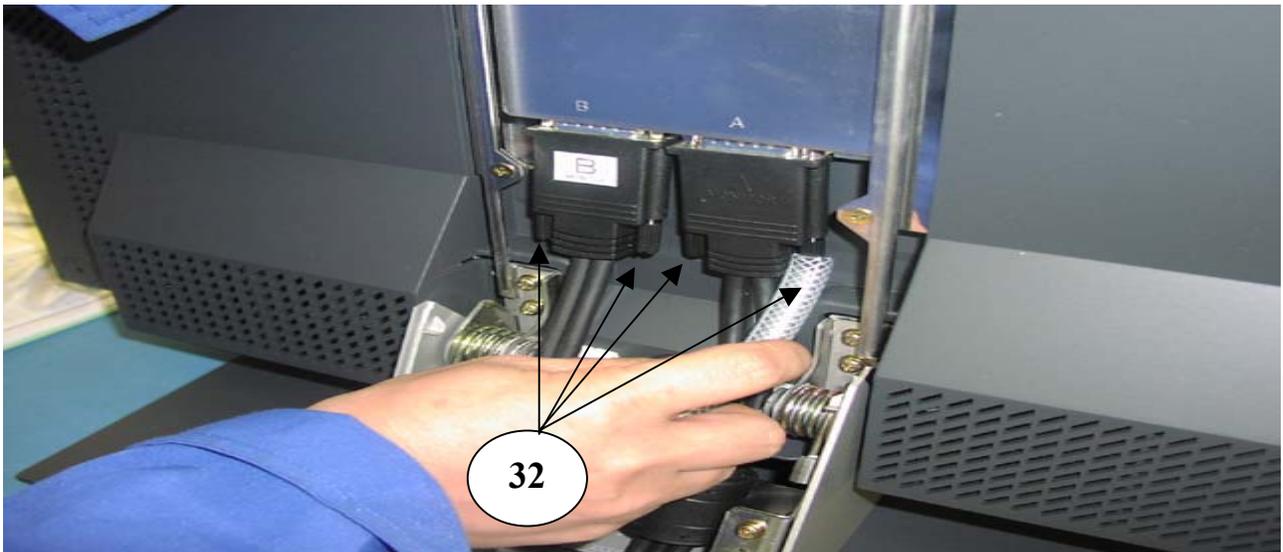
Place monitor base into position (Item 30) and insert eight (8) screws (Item 30A).

Assembly (Dis-Assy) Procedure
For
VIEWSONIC VP2290b MONITOR

ASSEMBLY



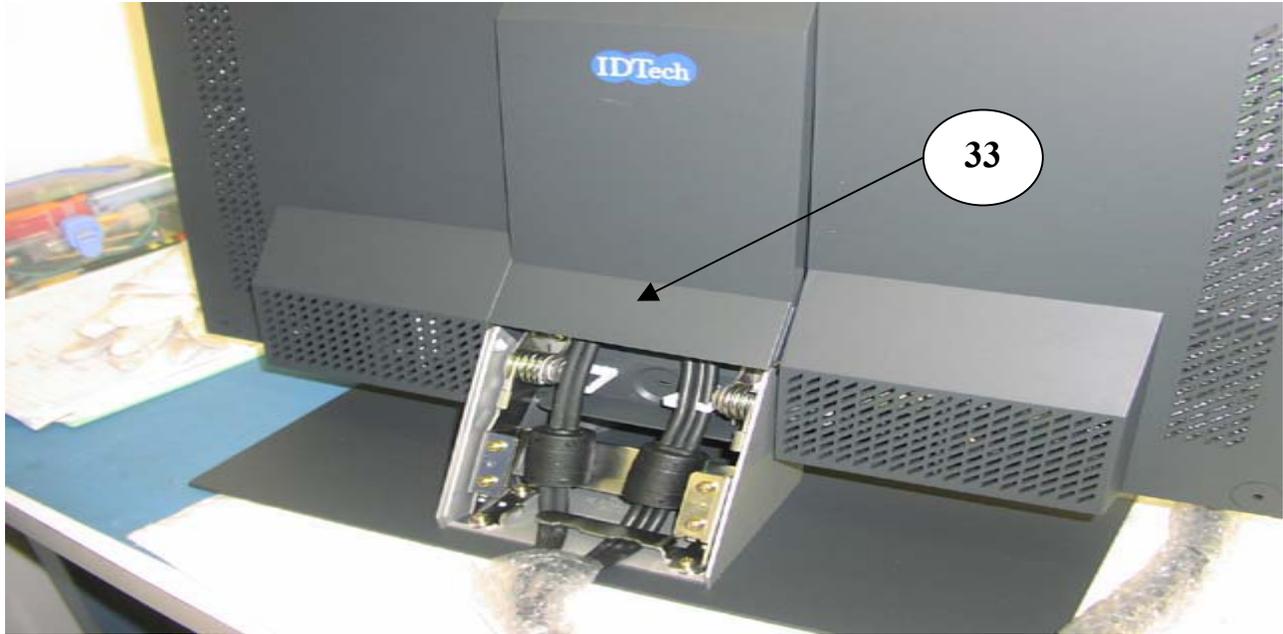
Ensure monitor base (Item 31) is secure before lifting monitor into upright position.



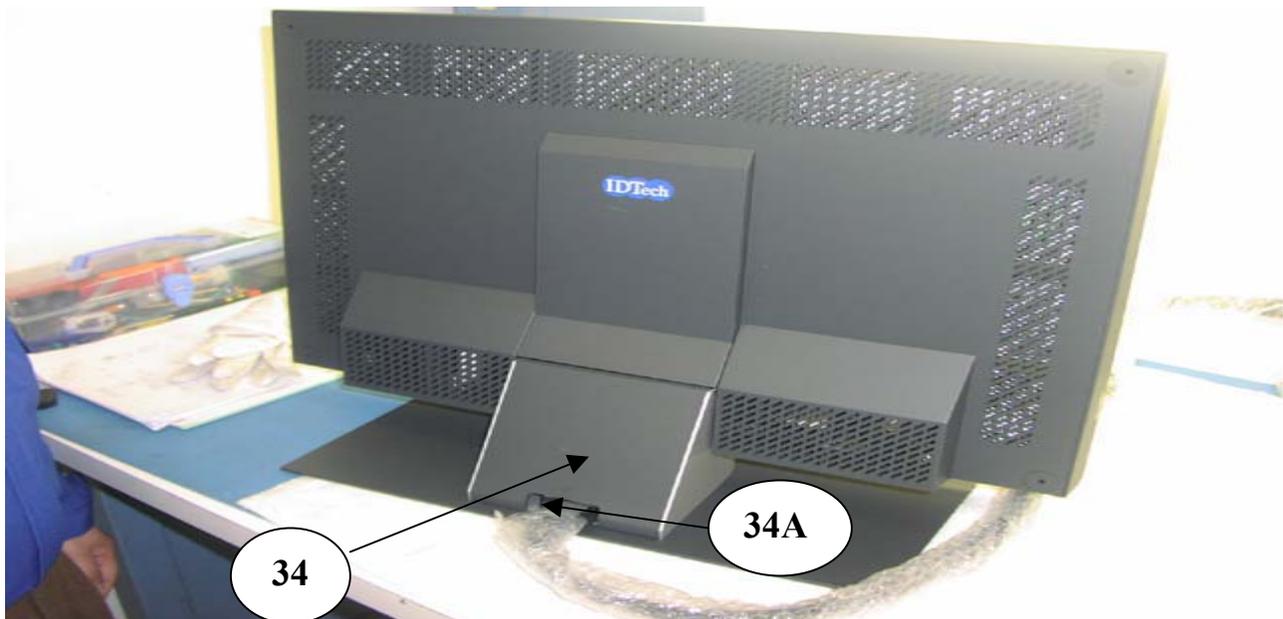
With monitor in upright position, connect two (2) interface cables and secure four (4) screws (Item 32) with the hose tool.

Assembly (Dis-Assy) Procedure
For
VIEWSONIC VP2290b MONITOR

ASSEMBLY



Install upper rear cover panel (Item 33) by snapping into position.



Install lower rear cover panel (Item 34) by snapping into position. Ensure interface cables routed through the opening (Item 34A). Monitor assembly is complete.

10. Recommended Spare Parts List

VP2290b-3 RSPL Rev 1a

Item	ViewSonic P/N	Reference P/N	Description	Location	Universal number#	Lead time
1	P-BX-0601-0980	13M3253	Converter box	Japan	VLCDS24728-3W(DG6)	4 wks
2	A-AD-0114-0226	55P4317	AC/DC adapter	Japan		4 wks
3	A-AD-0114-0227	55P5077	AC/DC adapter TCO	Japan		4 wks
4	PL-PS-0715-0167	07N2196	Pesestal stand	Japan		4 wks
5	A-VC-0101-0319	55P2997	DVIs/60 Pin cable	Japan		4 wks
6	A-VC-0101-0357	55P0995	DVIs/60 Pin cable 2 set	Japan		4 wks
7	A-PC-0106-0204	55P1876	AC/DC line cord US	Japan		4 wks
8	A-PC-0106-0329	55P1879	AC/DC line cord Japan	Japan		4 wks
9	A-PC-0106-0330	55P4312	AC/DC line cord Schuko	Japan		4 wks
10	P-BX-0601-0981	55P4315	Carton box for VLCDS24728-1W	Japan		2 wks
11	P-BX-0601-0982	55P5750	Carton box for VLCDS24728-2W	Japan		2 wks
12	P-BX-0601-0983	13M3249	Carton box for VLCDS24728-3W	Japan		2 wks
13	A-CD-VP2290B	55P4310	User's guide CD	Japan		2 wks
14	M-MS-0808-8256	55P4311	Quick start guide	Japan		2 wks
15	M-MS-0808-9577	55P5091	Liquid view CD	Japan		2 wks

VP2290b-3 BOM Rev 1a (Initial)

Item	ViewSonic P/N	Ref.P/N	Description	Location	Q'ty
1	#N/A	07N0610	LCD MODULE IDTech F8991E 22.2" QUXGA VP2290b-3	PANEL	1
2	#N/A	55P4303	PCBA MAIN BD LCD I/F "MINT-4" VP2290b-3	MAIN BOARD	1
3	#N/A	07N2217	BRACKET MAIN BD SECC 1.0t		1
4	#N/A	07N2211	FLEX CABLE 200*50 MAIN BD RIGHT HAND	PANEL WIRE	1
5	#N/A	07N2212	FLEX CABLE 200*50 MAIN BD LEFT HAND	PANEL WIRE	1
6	#N/A	07N2241	BRACKET FLEX CABLE SECC 1.0t FRONT SIDE		2
7	#N/A	07N2240	BRACKET FLEX CABLE SECC 1.0t REAR SIDE		1
8	#N/A	07N2214	BRACKET I/O CONN A5052 1.0t		1
9	#N/A	07N2215	MYLAR ADHESIVE 160*20*0.3t mm (BLACK)		1
10	#N/A	07N2213	LID BRACKET I/O SUS304 0.3t		1
11	#N/A	07N1217	WIRE MAIN BD 150mm DC 3.3V	PANEL WIRE	1
12	#N/A	07N1213	WIRE MAIN BD 140mm DC 6V	PANEL WIRE	1
13	#N/A	07N1214	WIRE INVERTER CARD 200mm	INVERTER WIRE	1
14	#N/A	55P4252	ASSY FRONT COVER ABS/PC V0 VP2290b-3	FRONT COVER	1
15	#N/A	55P4253	FRONT COVER ABS/PC V0 VP2290b-3		1
16	#N/A	07N1252	LENS LED ACRYPET		1
17	#N/A	07N2226	PCBA FRONT SWITCH BD 135*10mm		1
18	#N/A	07N1223	FLEX CABLE FRONT SWITCH BD 300*12mm		1
19	#N/A	07N2224	ASSY FRONT SWITCH BD ABS/PC V0 VP2290b-3	SWITCH BOARD	1
20	#N/A	07N2220	BEZEL ABS/PC V0 FRONT SWITCH BD		1
21	#N/A	07N2222	SELECT BUTTON ABS/PC SWITCH BD		1
22	#N/A	55P4242	ASSY REAR COVER ABS/PC V0 VP2290b-3	REAR COVER	1
23	#N/A	55P4241	REAR COVER ABS/PC V0 VP2290b-3		1
24	#N/A	07N1253	CAP SCREW HOLE REAR COVER BACK ABS/PC V0		4
25	#N/A	07N1254	LID SCREW HOLE REAR COVER BOTTOM ABS/PC V0		1
26	#N/A	07N1255	CLAMP REAR VIDEO CABLE NYLON		2
27	#N/A	07N1215	ASSY BACKBONE BRACKET SUS430 1.2t	MAIN BRACKET	1
28	#N/A	07N1226	BACKBONE BRACKET SUS430 1.2t		1
29	#N/A	07N2225	EMI GASKET (UC300286) 6*6*100		3
30	#N/A	07N1260	EMI GASKET (81TS-5-1.5) 5*1.5*400		1
31	#N/A	07N1186	CONNECTOR COVER ABS/PC V0 VP2290b-3	CONNECTOR COVER	1
32	#N/A	07N0898	ASSY COOLING FAN 60*60*20 SANYO	FAN	2
33	#N/A	07N2242	WIRE EXTENSION FAN 230mm		2
34	#N/A	07N2267	KAPTON TAPE 30*20 3M #5412		3
35	#N/A	55P0991	CABLE TIE NYLON KITAGAWA #T18R		5
36	#N/A	13M3245	LABEL INFORMATION 136*70 VP2290b-3		1
37	#N/A	07N1183	ASSY BASE STAND ABS/PC VP2290b-3	BASE STAND	1
38	#N/A	07N1231	HINGE ASM LEFT SUS430 2.0t	HINGE	1
39	#N/A	07N1232	HINGE ASM RIGHT SUS430 2.0t	HINGE	1
40	#N/A	07N1184	BASE STAND FRONT COVER ABS/PC V0 VP2290b-3		1
41	#N/A	07N1234	BASE STAND REAR COVER ABS/PC V0 VP2290b-3		1
42	#N/A	07N1235	BRACKET BASE STAND SUS430 2.0t		1
43	#N/A	07N1236	BOTTOM STEEL-PLATE BASE STAND SECC 2.9t		1
44	#N/A	07N2261	TOOL KIT PACKAGE CONNECTOR FIX		1
45	M-MS-0808-7725	55P5090	TCO95 FLIER ECO DOCUMENT	TCO95 ECO DOCUMENT	1
46	#N/A	13M3246	LABEL SERIAL NUMBER 50*22 VP2290		1
47	#N/A	07N2227	VIDEO CABLE DIGITAL SIGNAL DVI 1.8m	VIDEO CABLE	1
48	A-AD-0114-0177	U1610X3	ACDC ADAPTER TCO95 HIPRO	ACDC ADAPTER	1
49	#N/A	13F9959	LINE CORD STRAIGHT 1.8m	LINE CORD	1
50	#N/A	13F9978	LINE CORD RIGHT ANGLE 1.8m	LINE CORD	1
51	#N/A	55P4258	USER'S GUIDE CD (WIZARD CD) Date Code 12/15/03		1
52	#N/A	55P4254	QUICK START GUIDE + CD (LIQUID VIEW) VP2290b-3	USER'S GUIDE	1
53	#N/A	55P5796	LIQUID VIEW CD VER 2.06		1
54	#N/A	55P4243	LABEL UPC BARCODE 76*76mm		1
55	#N/A	13M3247	CARTON VP2290b-3	CARTON	1

Reader's Response

Dear Readers:

Thank you in advance for your feedback on our Service Manual, which allows continuous improvement of our products. We would appreciate your completion of the Assessment Matrix below, for return to ViewSonic Corporation.

Assessment

A. What do you think about the content after reading **VP2290b-3** Service Manual?

<i>Unit</i>	<i>Excellent</i>	<i>Good</i>	<i>Fair</i>	<i>Bad</i>
1. Purpose				
2. Scope				
3. Responsibility				
4. Reference Documents				
5. Tools Required				
6. Areas Affected				
7. Document Retention Period				
8. Standard and Precautions				
9. Procedure				
10. Recommended Spare Parts List				

B. Are you satisfied with the **VP2290b-3** service manual?

<i>Item</i>	<i>Excellent</i>	<i>Good</i>	<i>Fair</i>	<i>Bad</i>
1. Service Manual Content				
2. Service Manual Layout				
3. The form and listing				

C. Do you have any other opinion or suggestion about this service manual?

Reader's basic data:

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Add.:			
Tel:		Fax:	
E-mail:			

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