24" MAIN BUILD PROCEDURE

DATE

2017

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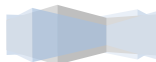
30BG####C

Author:	DF (D. Foale) LS (L. Swan)
Date:	13/02/17
Approval:	SP (S. Phillips)
Date:	13/02/17

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TABLE OF CONTENTS

The information here within, outlines and details the procedures undertaken in KME's commitment to Quality Assurance in direct correlation to part number:

29LR244WA####-M

This article acts as an illustrated record of every action to be carried out in the process of building and testing every unit to the same exacting standard.

The steps, actions and information within this document must be applied to every monitor passing through the build and test stages within Production.

Each section must be carried out according to this document and must be signed off for each unit in conjunction with the main build procedure route card '**30PB####C**'.

Any rejects found during undertaking of the build procedure must be recorded on the history sheet '**30PB0500A**'

The numerical actions listed below must be carried out in the specified order, with the aim to achieve the same assurance goal for every unit without deviations or concession.

REVISION HISTORY

| Rev. No.:	Change Description	Date
A1	**Draft issued for release**	**23/06/16**
	Formatting finalised.	
	__1. Preparation Sections__ 2.2 added to list.	
	__2. Monitor Assembly__ Procedure Kit List updated.	
	__2.1.__ Part number added.	
	__2.2.1.__ Gasket orientation added due to only fitting one way round.	
	__2.2.5.__ Direction to cut around pillars added.	
	__2.5.__ Statement added to confirm panel blackout not required.	
	__2.15.__ Action removed as mounting method changed.	
	__Figure 9.__ Removed	
	__3.6.__ Command removed as irrelevant.	
	__4. Final Monitor Casing__ Procedure Kit List updated.	
	__Figure 42.__ Updated to new dressing method.	
	__4.7.__ Supply HDMI bracket with monitor to QA.	
	__4.8.__ QA Readiness statement added.	
	__5.4.__ Description changed to fit bracket.	
	__5.7.__ Wording changed to check unpainted metalwork.	
	__5.8.2.__ Location added.	
	__5.9.__ Wording changed to check unpainted metalwork.	
	__5.15.__ Command removed as irrelevant.	
	__5.20.__ Correction made to method of supply.	
	__TAB 5.__ Label Index updated to correct photo.	
A	**Formally issued for release**	**06/09/16**
	Contents page numbers updated.	
	__2. Monitor Assembly__ Procedure Kit List updated.	
	__3.1__ Updated Key – Tab3	
	__3.36.2__ Elaborated on test required for LED brightness.	
	__5.41.2.__ Elaborated on test required for LED brightness.	
B1	**Draft issued for release**	**03/11/16**
	__2. Monitor Assembly__ Procedure Kit List updated.	
	Table of Contents *Route card version revised*	
B	**Formally issued for release**	**25/11/16**
	__2. Monitor Assembly__ Procedure Kit List updated.	
	__2.38__ Part number updated.	
	__3.1__ Updated Key – Tab3	
	__5. Quality Procedure__ Updated	
C	**Formally issued for release**	**11/01/17**

1. PREPARATION SECTIONS

The following sections within the table below can be carried out prior to the main build sequence and therefore do not necessarily need to be done in the sequence specified.

CALL OUT SECTIONS		TAB 1
SECTION	TITLE	PAGE NUMBER
No whole section can be carried out early.		

If any of these sections are carried out outside of the specified sequence outlined within this document, i.e. at the beginning on mass, the appropriate assembler must sign off the corresponding sections within all supporting documentation. The sign-off must be on the date that the action was carried out.

NOTE: Advanced preparation of cut to size gap pad, any manually cut gaskets et cetera are also permitted in addition to the above complete sections, as listed below (do not sign off as above):

2.16

2.2

2.28

2.35

2.40

2.45.3 (Partial)
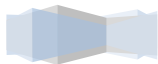
2. MONITOR ASSEMBLY

PROCEDURE KIT LIST			TAB 2
PART NUMBER	**DESCRIPTION**	**IDENTIFICATION**	**QTY**
20BK0386P/1	MAINS FILTER ASSY	FIL1	1
20BK0486P	GENERAL MICRO-CONT BOARD	MIC1	1
20BK0766P	MIL OSD MEM FIL	OSD1	1
21LD0044P/1	TFT DRIVER SVX-1920 V3	DRI1	1
30PH1735P-B	12W MOL - 2W MOL & 3W 3.96MM		1
30PH1785P-A	XHP-5 - 50KD8383P X1 ENABL		1
30PH1845P	3W 3.96MM - 5W MOL & CRMP RING		1
30PH2183P	AC INLET + FUSE TO 5W MOLEX		1
30PH2544P	10W 1.25MM - 3W,4W&10W 1.25MM		1
30PH2545P	14W 1.25MM - CMPS,5W & 10W		1
31PG0240/5P-LAR	24" GLASS D/S AR LAM		1
31PR0351P	XP POWER SUPPLY 12V 7.5A	PSU1	1
31PR1186P	CUSTOM 8 B'TN MEMBRANE + LED	MEM1	1
31PR1194P-A	ACI I-DRIVE 5, 16W LED DRIVER	LED1	1
31PR1195P	DUAL CHANNEL LVDS INTERCONNECT		1
34DD0218-27-1-1/A	CABLE SECURING BRACKET	CSB1	1
34DD0218-28-1-1/A	LVDS FILTER BLANKING PLAT	LFB1	1
34DD0218-7-2-1/A	31PR0351P HEATSINK BRACKET	HSB1	1
34DD0335-3-1/B	24" FRONT BEZEL	FB1	1
34DD0335-3-2/B	24" WIDE CHASSIS	CHS1	1
34DD0335-3-4/B	24" CONNECTOR PANEL	CP1	1
34DD0335-3-5-1/A	24" WIDE PANEL SUPPORT	PS1-4	4
34DD0335-3-8/A	24" WIDE CENTRAL SUPPORT STRUT	PS5	1
40SA4BH1M03-006BTL	A4 SS M3x6 B/H TRX BLK TUFLOK		36
40SA4BH1M03-010BTL	A4 SS M3x10 B/H TRX BLK TUFLOK		4
40SA4CS1M03-006BTL	A4 SS M3X6 C/S TRX BLK TUFLOK		56
42EG9408P	GROMMET REEVITE RB6840		1
42EG9446P	RETAINING CLIP IEC CONN KT0006		1
42EG9524P	2MM GAP PAD		0.27
42EG9654P	O-RING ID5.28MM, CROSS-S1.78MM		16
42EG9655P	2X10MM CLOSED CELL EPDM SPONGE		3.55
42EG9656P	PRE-CUT PIN GASKET		1
55FP0197P-MOD-C	24" AUO G240HW01V0 1920X1080	TFT1	1
LC2032P	BLACK D/S TAPE 12mm 3M4919		0.245
LC2034P	BLK S/SIDED SOFT TAPE 7.5x3mm		0.98

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2.1 Using the front cover (FB1), apply the EPDM sponge (42EG9655P) to the inner bezel edge that mates to the protection screen.

    2.1.1The sponge should be placed in the middle of the bezel and not entirely pressed up against the bezel edge wall.

    2.1.2Ensure that the joins mate perfectly without gaps to provide the relevant IP sealing.

Fig. 1
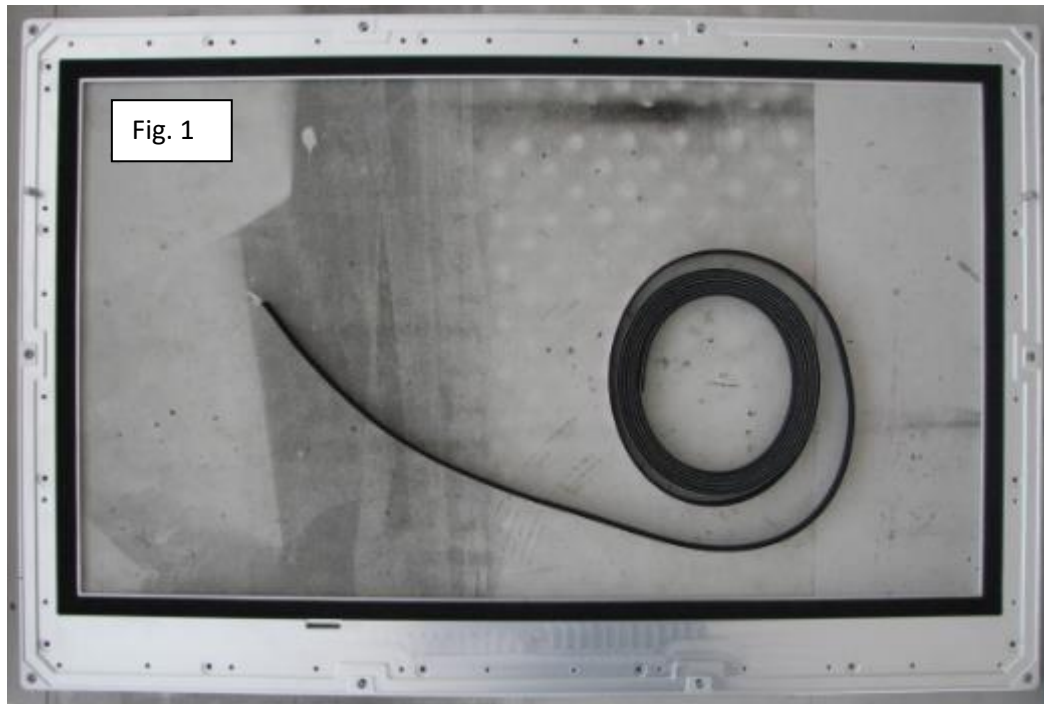
2.2 Now using the pre-cut 0.8mm pin gasket, carefully fit around the outer bezel face. This is the console gasket of which will be free to the elements until mounted by the customer so please take the utmost care when fitting, as any faults will be easily visible and detrimental to the console seal.

    2.2.1The bottom bezel is fractionally larger meaning the gasket can only be fitted one way round, check before fitment.

    2.2.2The adhesive is very sticky and will stick to the metalwork with the slightest touch so care must be taken to ensure it is correctly located before contact is made. This should also be taken into account when considering not removing too much of the adhesive protection before fitting.

    2.2.3The gasket will easily stretch so try to reduce this by locating the corners or protrusion sections first.

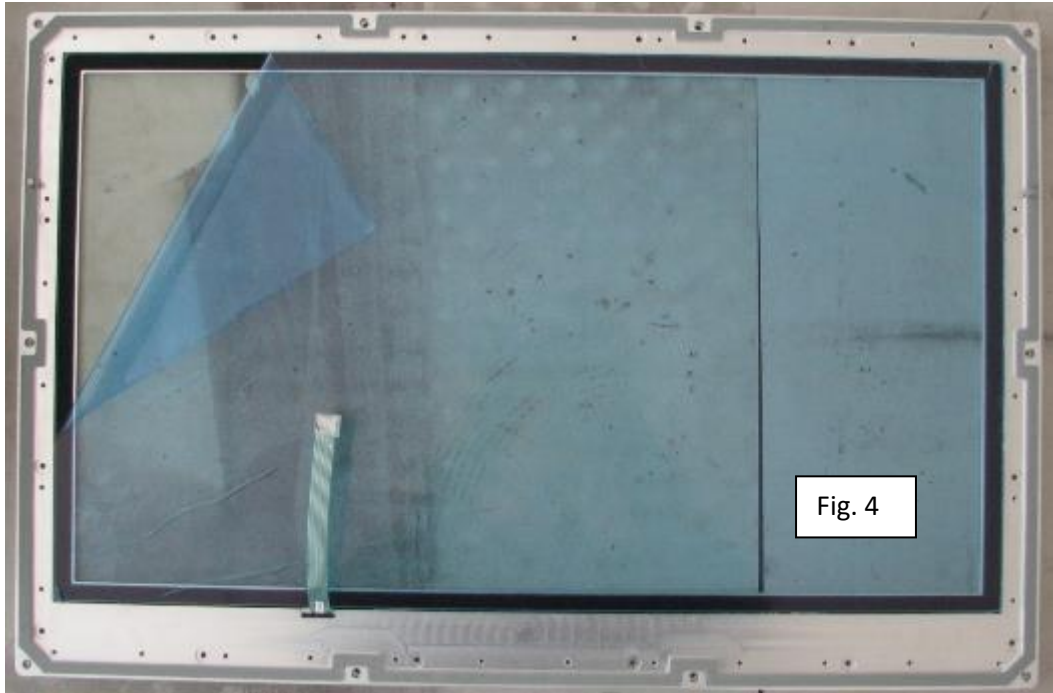   2.2.4Then remove the protection tape from the straights and lower.

2.2.5 Cut around the location pillars highlighted in figure 2 to finish gasket placement.
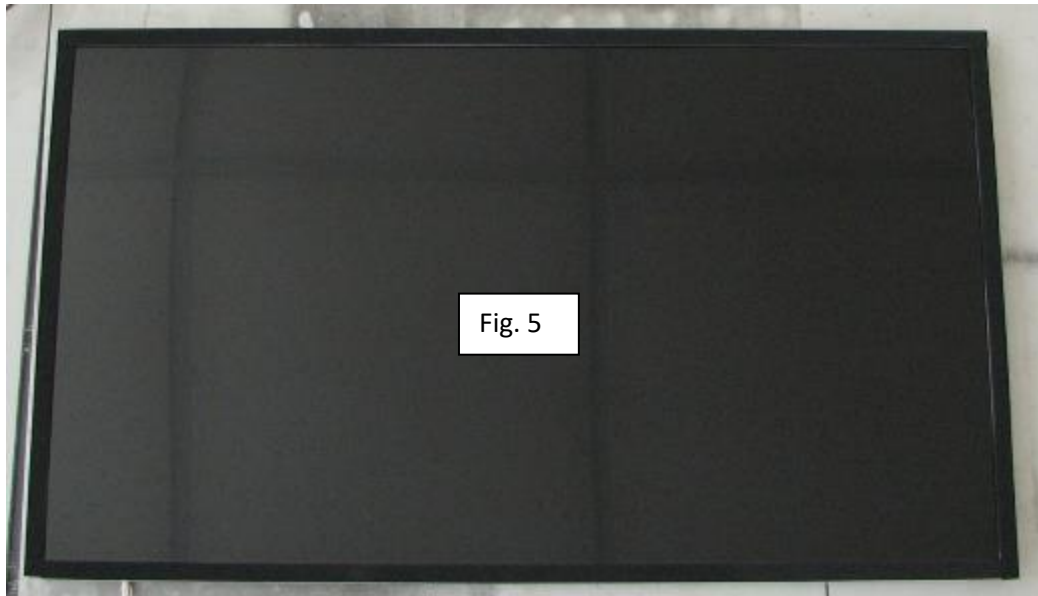
Fig. 2
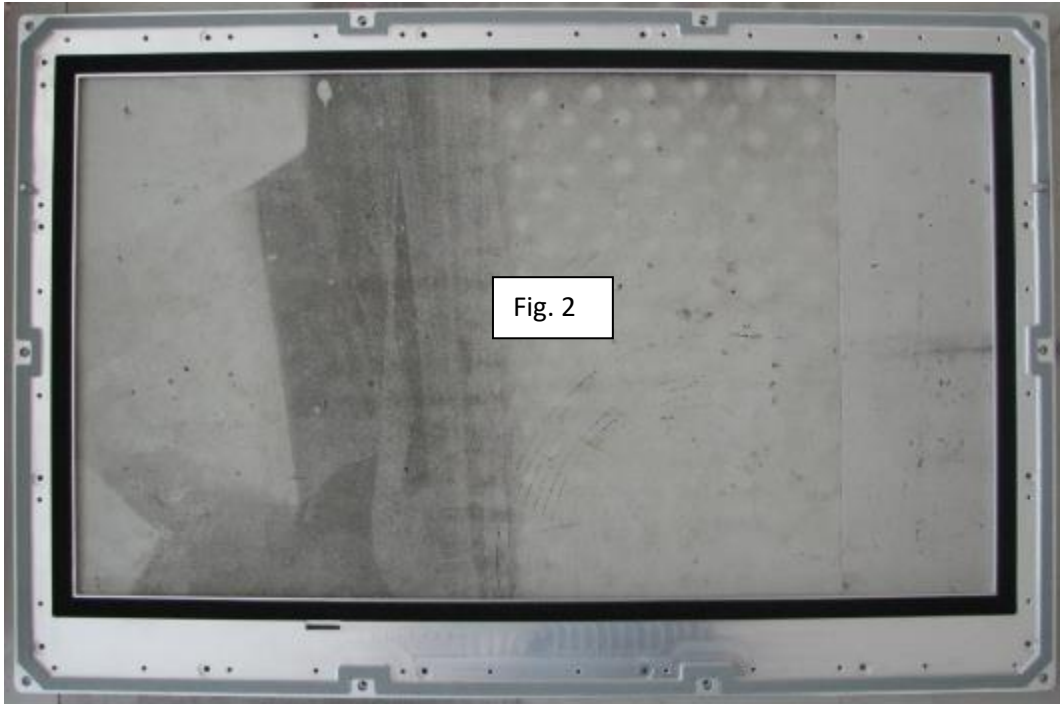
2.3 Turn FB1 over, locate the membrane (MEM1) into the recess and press into place ensuring even positioning.

Fig. 3
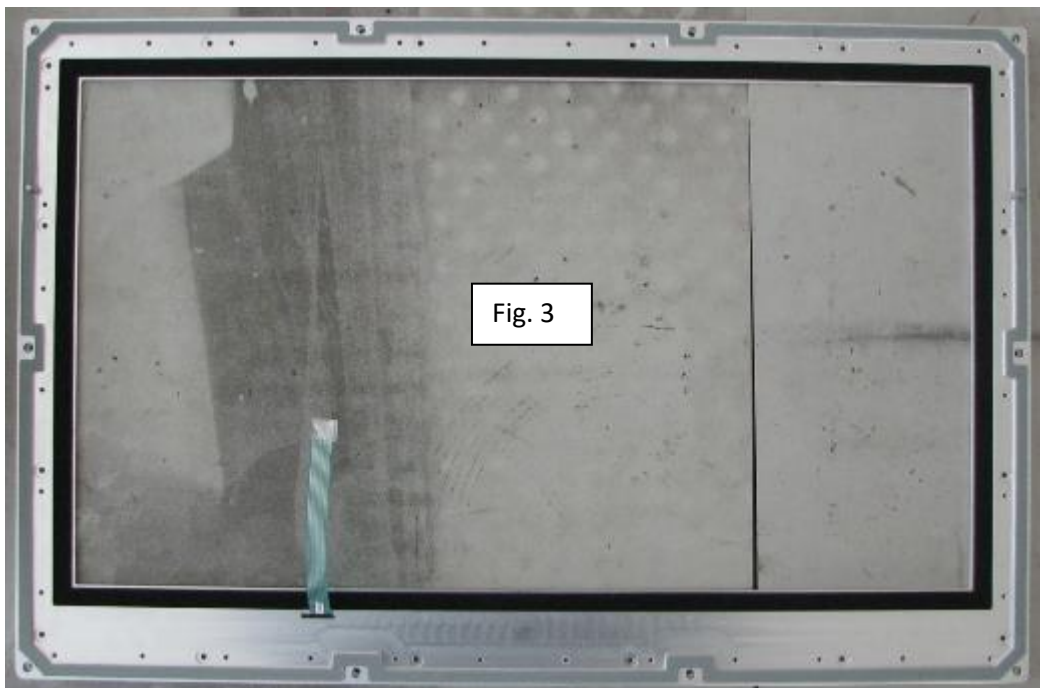
2.4 The protection screen must now be lowered onto the EPDM sponge already fitted.

Fig. 4

2.5 Now using the panel (TFT1), do not black out panel, apply the same EPDM sponge around the outer bezel edge as shown in figure 5.

Fig. 5

8

2.6 Now apply a small amount of IPA sprayed onto a clean lint free cloth and carefully clean the surface of the panel to remove any marks, oil, finger prints or stubborn dust particles.

2.7 Carry out the same cleaning method as above on the protection screen (preferably against a black background).

2.8 Once both parts are clean, use an air gun to remove any residual foreign objects.

2.9 Offer the two parts up to one another and using the air gun, apply pressurised air to the surfaces clearing any dust or other particles before closing the two parts.

2.10 Look over the screen and judge any dust according to ISO standard 'ISO 9241-307'.

2.10.1 If it is deemed as unacceptable, carry out the process again in order to achieve a dust free image (where necessary and within reason).

2.11 Once achieved, place a protective layer of film over the front cover and flip over to prepare the rest of the build.

Fig. 6

2.12 If the LED cable is supplied with the panel unattached, then fit as seen within figure 7.

2.13 Now record the TFT part number including the version on the route card. This can be found on the label on the bottom right-hand corner label.
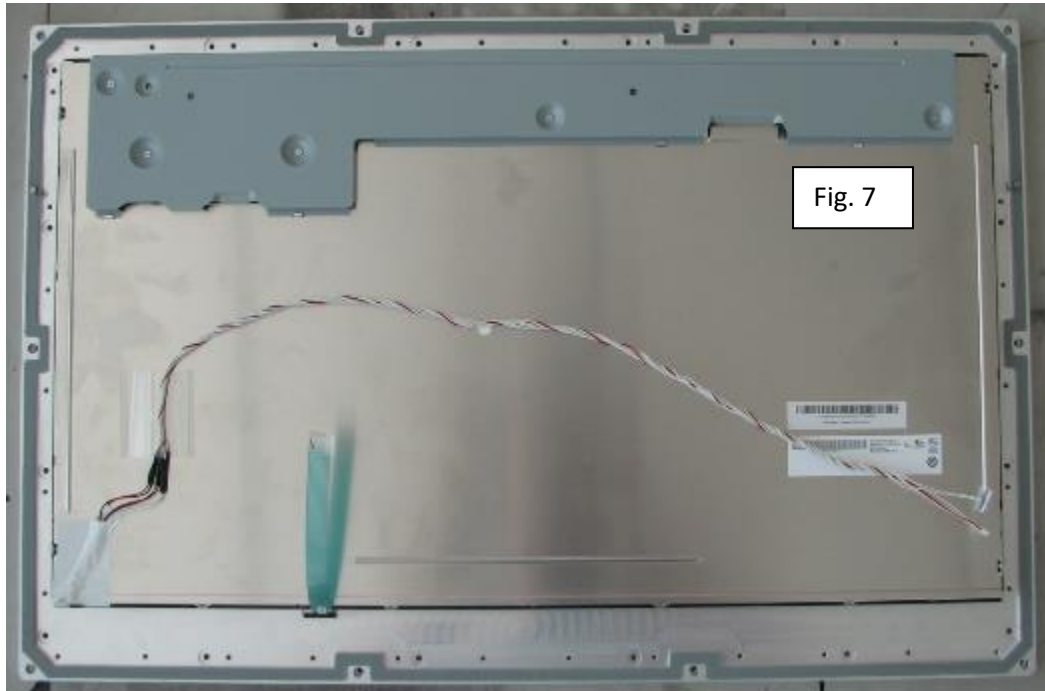
9

Fig. 7

2.14   Attach the LVDS cable and dress all wiring according to figure 8.

    2.14.1   The dressing should use the yellow polymide tape to secure with silicon adhered to either side for extra security and along with a thin strip on the mating connection.
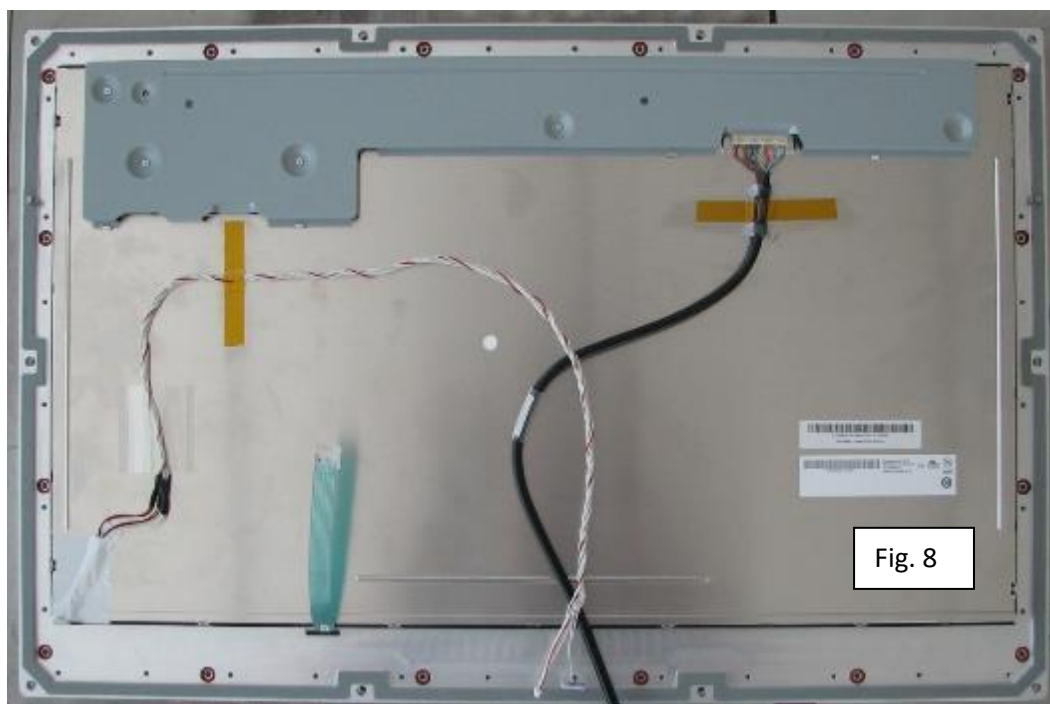   Allow curing time according to individual specifications.


Fig. 8

2.15   There are sixteen recessed locations that require the O-rings (42EG9654P) inserted before the chassis can be lowered. These are shown in red in position in figure 8.

2.16   Using a panel support strut (34DD0335-3-5-1/A), place a strip of 'LC2034P' exactly as shown in figure 9. The position is critical as this gasket is to protect the membrane tail.


Fig. 9

2.17   Secure the strut to the chassis bushes on the right-hand side, using four M3x6mm C/S screws. Ensure that the tape is situated closest to the adjacent chassis wall.


Fig. 10

2.18   Using the remaining three struts, fix in place using twelve M3x6mm C/S screws (as shown in red in figure 11).


Fig. 11
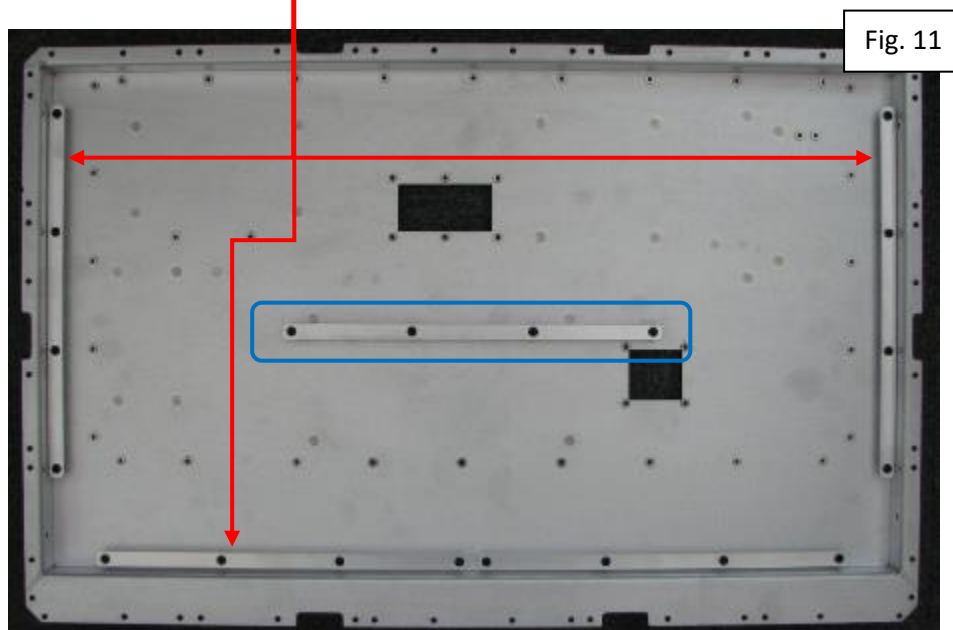
2.19   Now using the central support strut (34DD0335-3-8/A), fix in place using four M3x6mm B/H screws (as highlighted in blue in figure 11).

2.20   Using 'LC2034P' gasket, place a strip along the face of the four outer support struts (highlighted in green in figure 12).

2.21   Using 'LC2032P' place a strip along the length of the central support strut (highlighted in blue in figure 12).

Fig. 12
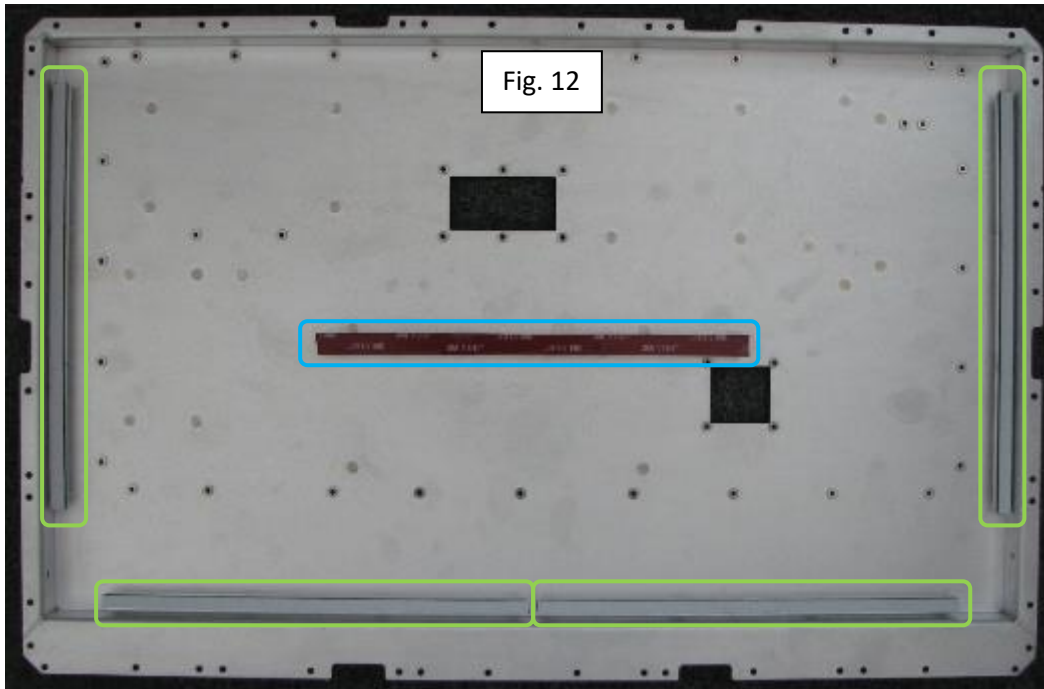
2.21.1   Once in place, remove all protective backing layers from the gasket.

Fig. 13
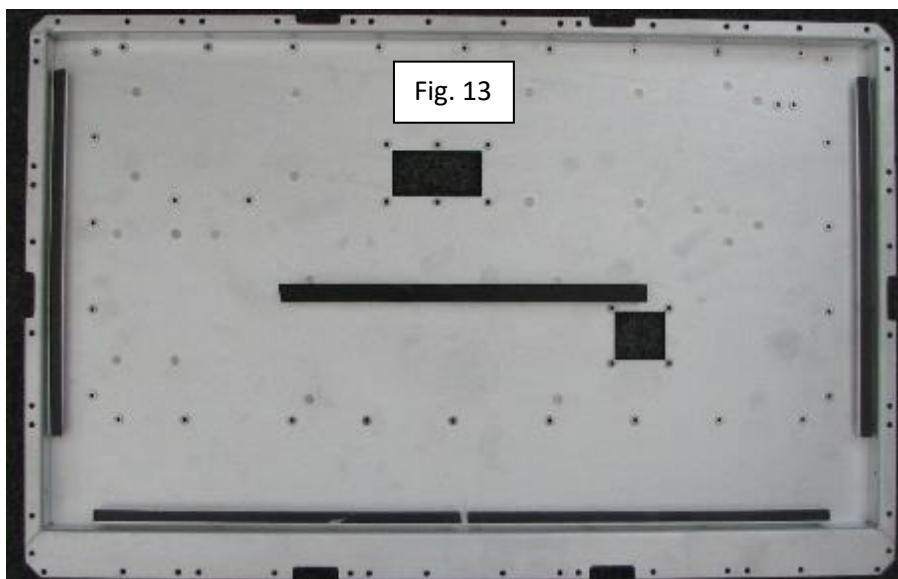
2.22   Position the chassis over the front cover assembly and feed the membrane tail underneath the support strut that should have the protective gasket on.

Fig. 14

Fig. 15
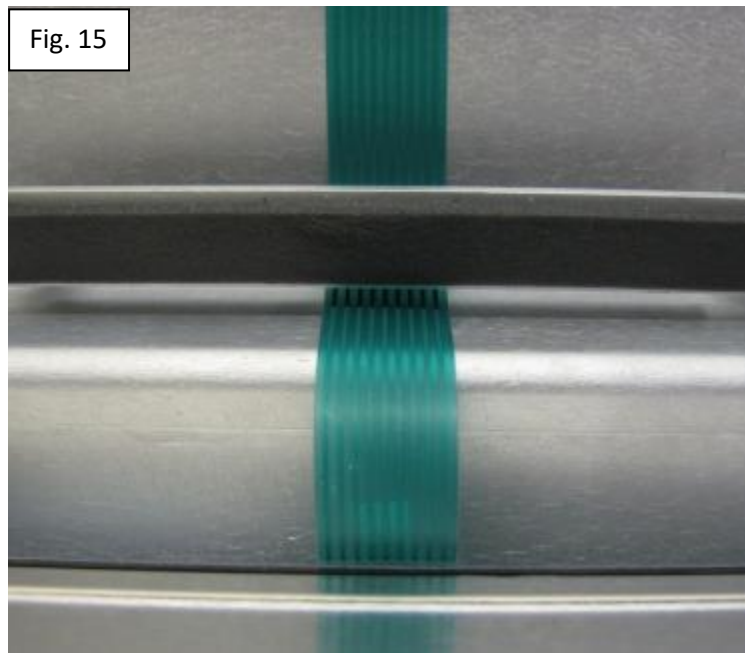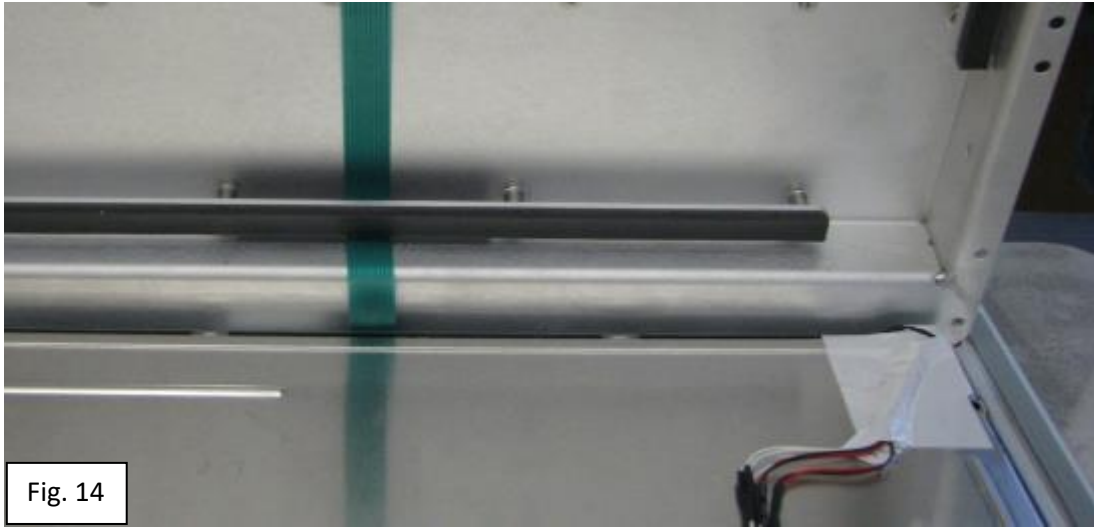
2.22.1   Feed the remaining membrane tail through the OSD filter hole and secure if necessary.

2.23   Now feed the TFT LED cable connections and the LVDS cable through the LVDS filter position.

2.24   Carry out a final visual inspection of the O-rings to ensure they're all located sufficiently.

2.25   Lower the chassis over the TFT being careful not to move the panel and breaking the dust seal.

2.26   Use four M3x6mm C/S screws to secure the panel from the sides.

Fig. 16
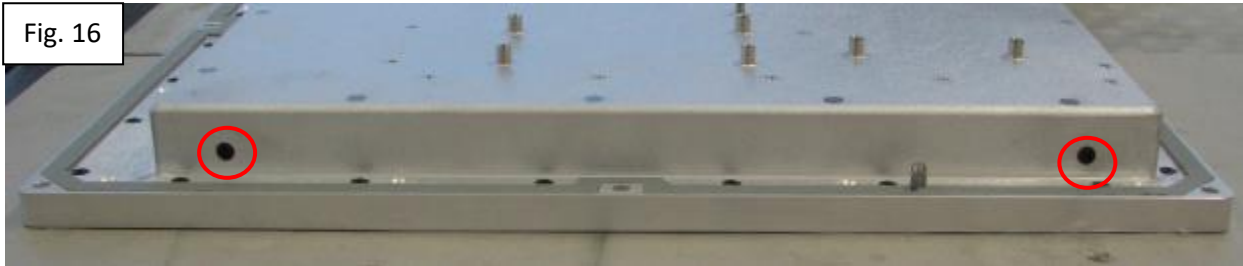
2.27   Now use thirty-six M3x6mm C/S screws to secure CHS1 onto FB1 (highlighted in figure 17).

Fig. 17

14
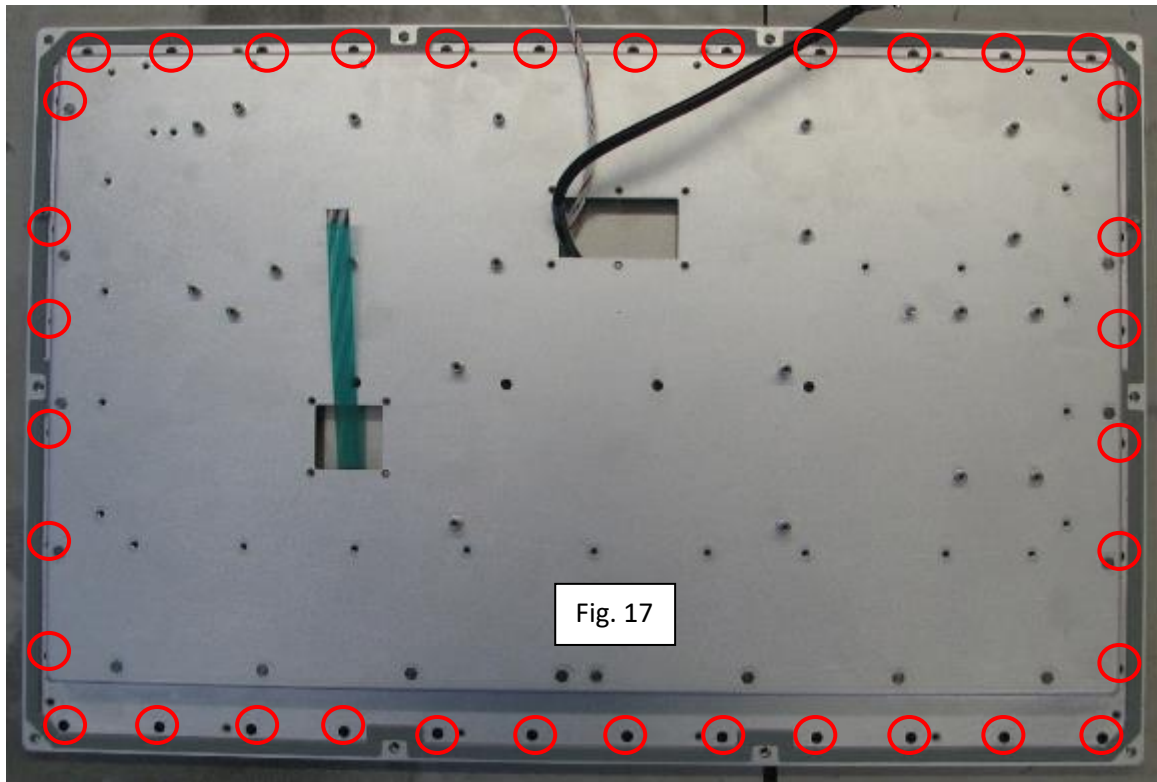
2.28   The next stage is to secure the membrane tail onto OSD1 (20BK0766P). Slide the membrane into 'J1' and secure using four M3x6mm B/H screws. Silicon the connector and allow curing time according to individual specifications.

Fig. 18

2.29   Fit the mains input assembly (30PH2183P) into the connector plate (CP1). Ensure that it is secured using the retaining clip (42EG9446P) and tighten the fuse nut.

Fig. 19

2.29.1   Tighten the fuse nut and then manoeuvre the fuse hood down over holder.

Fig. 20
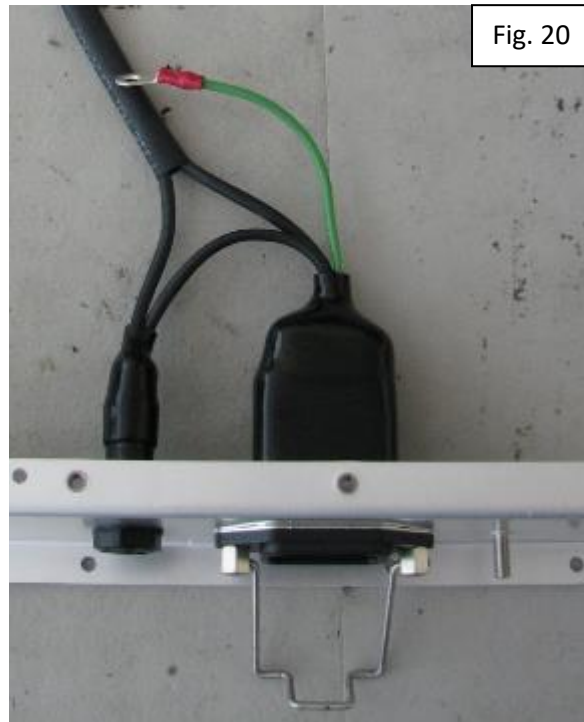
2.30   Now secure CP1 onto CHS1 using nine M3x6 B/H screws (as shown in figure 21).

Fig. 21
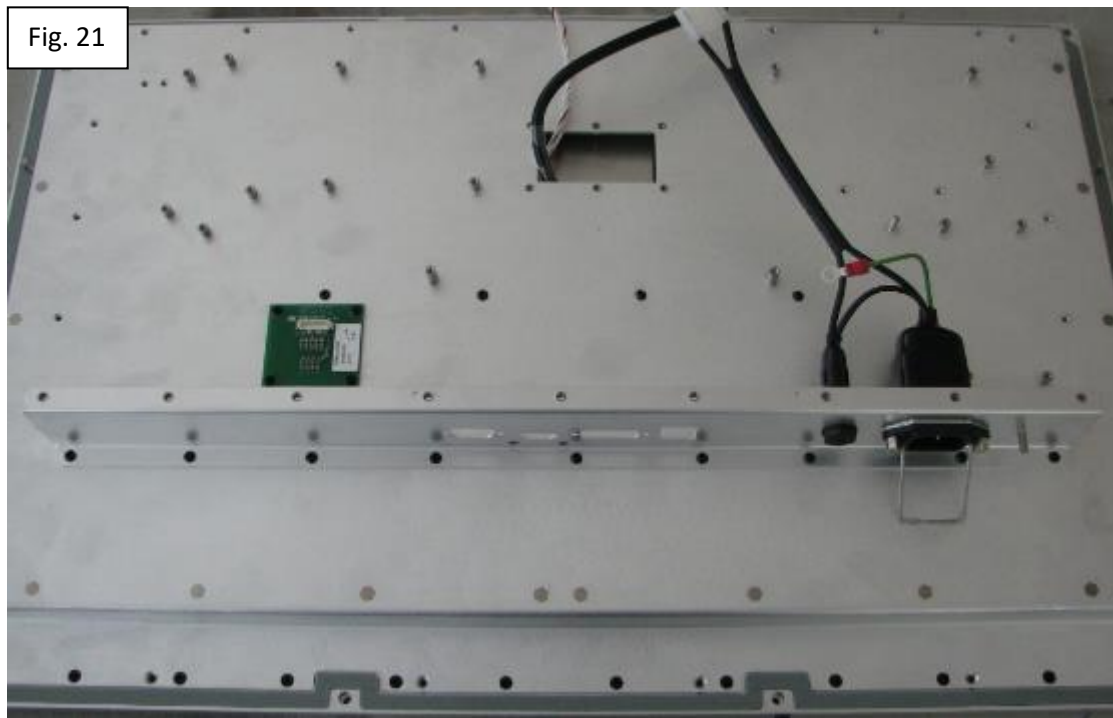
2.31   Place the earth tag onto the earth stud but do not secure at this point (see figure 22).

Fig. 22
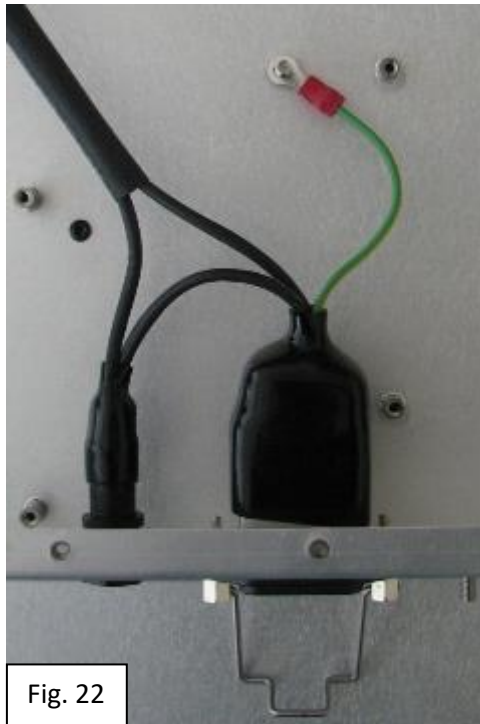
2.32   Locate 20BK0386P/1 (FIL1) and secure using four M3x6 B/H screws.

Fig. 23
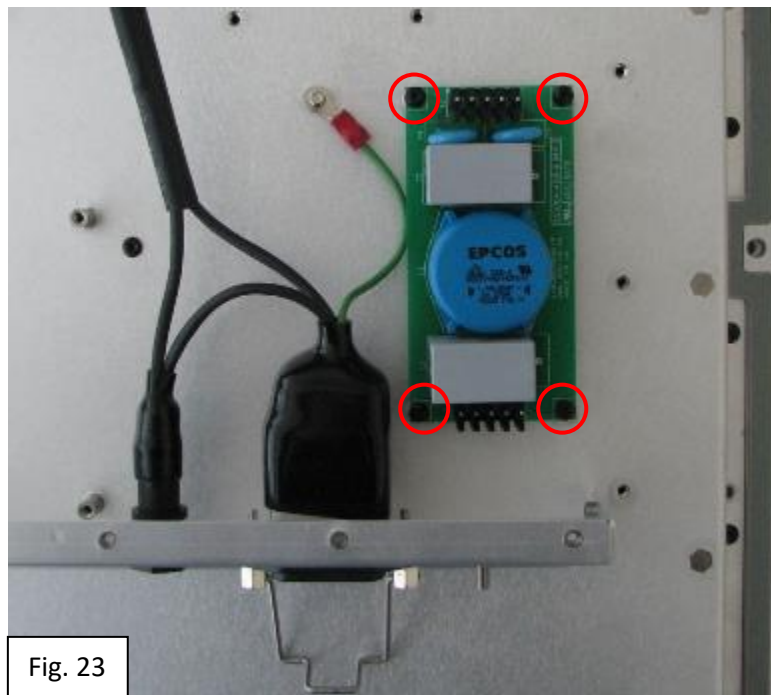
2.33   According to the narrations below (which correspond to the BOM narrations) plug the following lead assembly as specified.

  2.33.1   30PH2183P

  2.33.1.1   FIL1/J1

Fig. 24
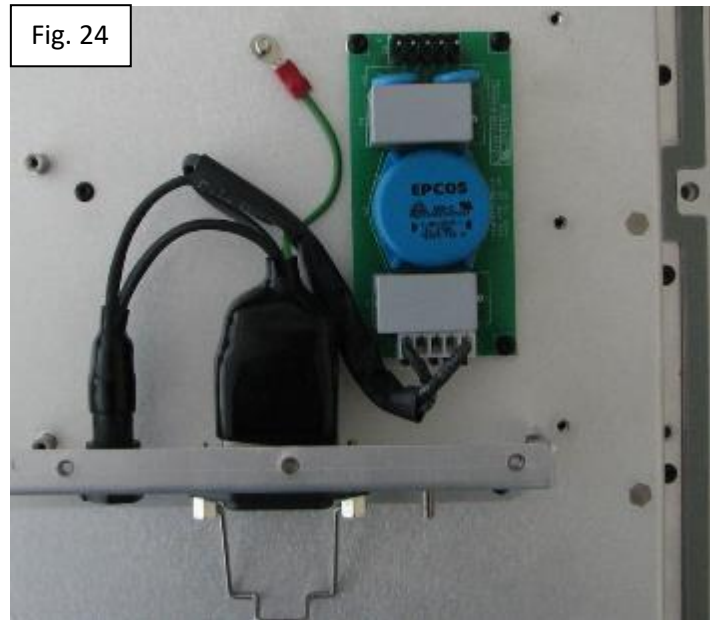
2.34   Now secure 31PR0351P (PSU1) using two M3x6mm B/H screws.

Fig. 25

18
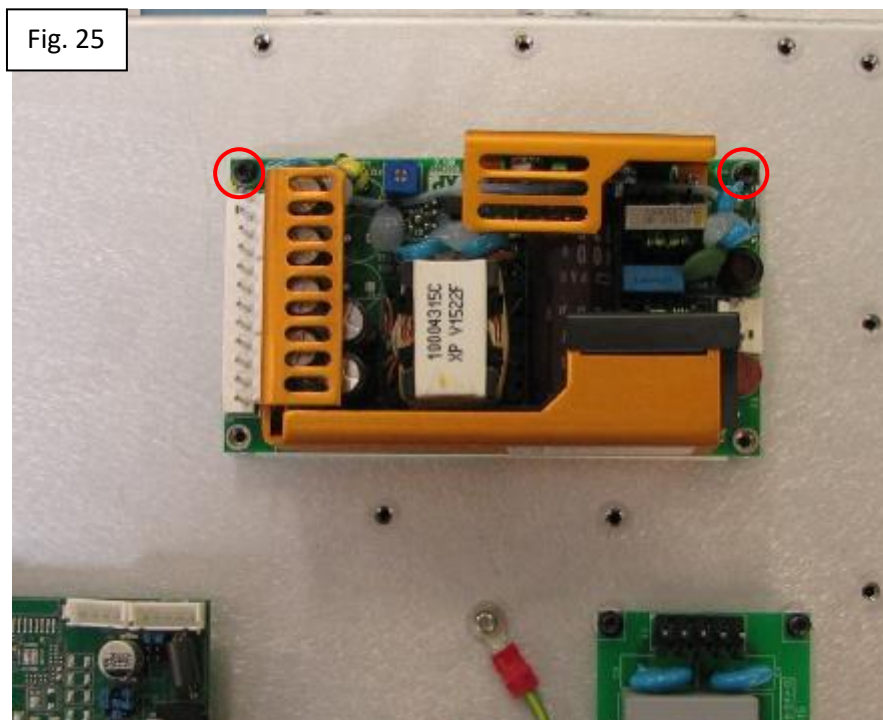
2.35   On 21LD0044P/1 (DRI1), remove the screw-locks on the VGA and DVI connectors and keep safe.

Fig. 26
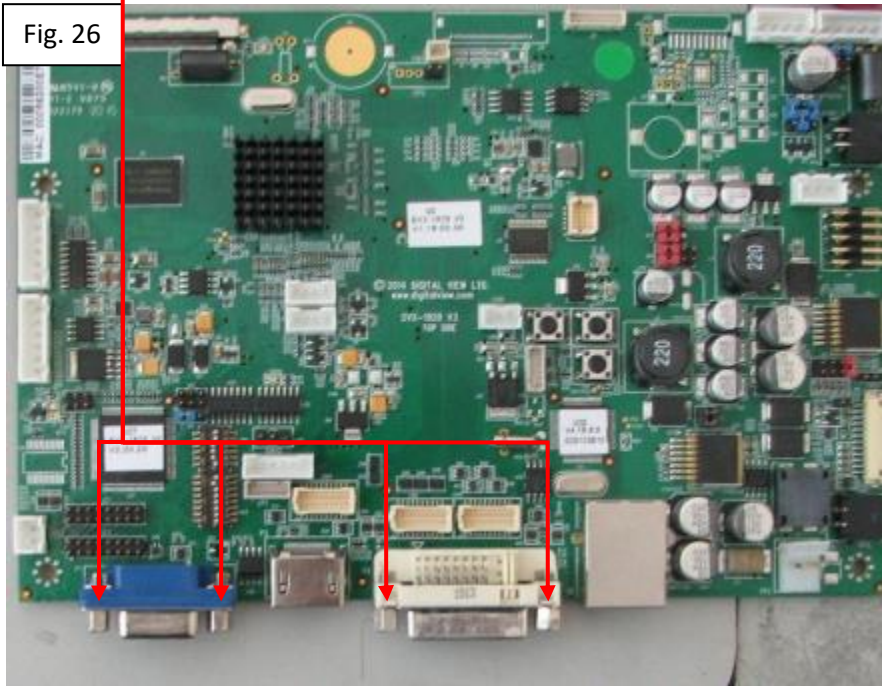
2.36   Locate the driver according to figure 27 and secure firstly with the saved screw-locks.

Fig. 27

2.37   Now fasten down DRI1 using three M3x6mm B/H screws.

 2.37.1   Note that the two lower fixings are accessed through the holes in CP1 and the highlighted areas denote their general location.

Fig. 28

2.38   Now fix the LED driver '31PR1194P-A' (LED1) onto CHS1 using two M3x6mm B/H screws.

Fig. 29

20
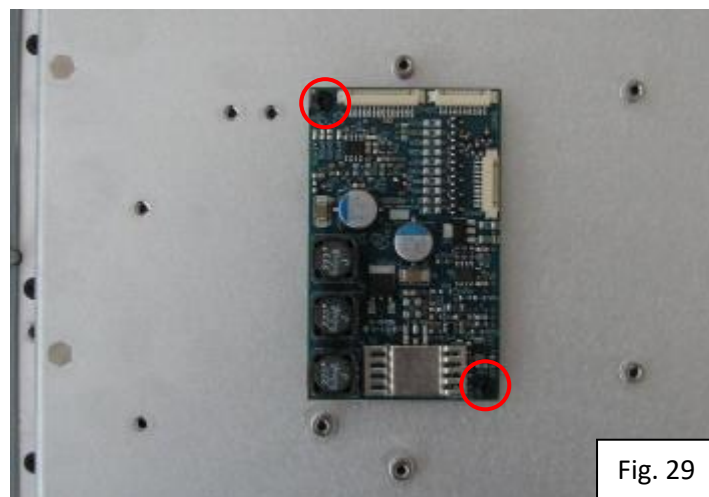
2.39   Make the following slot adjustments on MIC1:

    2.39.1   S/C = SL6, SL7, SL18, SL19, SL20

    2.39.2   O/C = SL4, SL9, SL12

2.40   The micro-controller board (MIC1) can now be located onto CHS1 but only loosely secure using four M3x10mm B/H screws, as all fixing locations will require loop tie wraps fitted during the dressing stage. Orientate so that '*J1 & J12*' are facing towards DRI1.
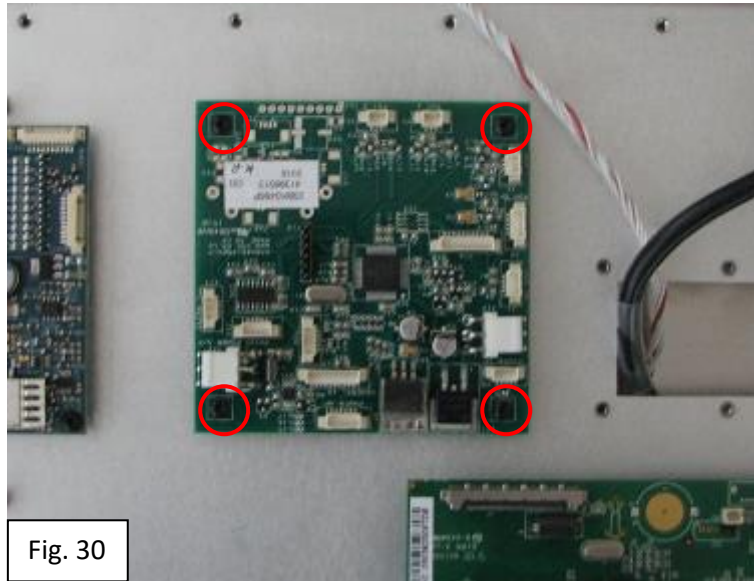
Fig. 30

2.41   Using the 2mm gap pad (42EG9524P), cut a 20mmx90mm section.

    2.41.1   Fit on the PSU heat-sink bracket (HSB1) so that it will mate to the PSU wall. Place uppermost on the wall side as shown in figure 31.

Fig. 31

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2.42   Locate HSB1 onto CHS1 and loosely fit using two M3x6mm B/H screws.

2.42.1   Push the bracket up against the PSU and whilst holding under compression, tighten the two fixings.


Fig. 32
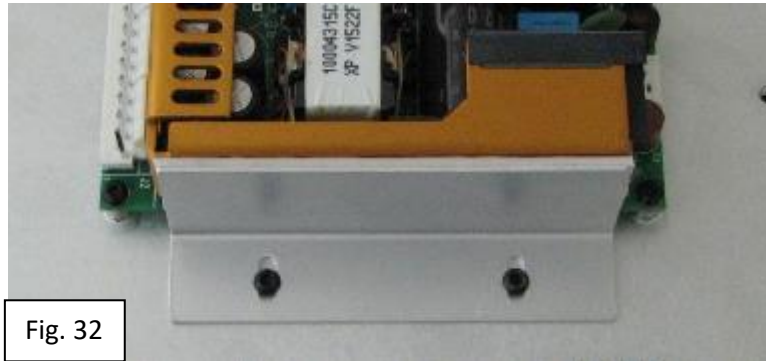
2.43   According to the narrations below (which correspond to the BOM narrations) plug the following lead assembly.

2.43.1   300PR0679P

2.43.1.1   FIL1/J2 – PSU1/J1

2.43.1.2   Place the earth tag onto the earth stud and secure using an M4 nut with SH/P washer.

Fig. 33

22
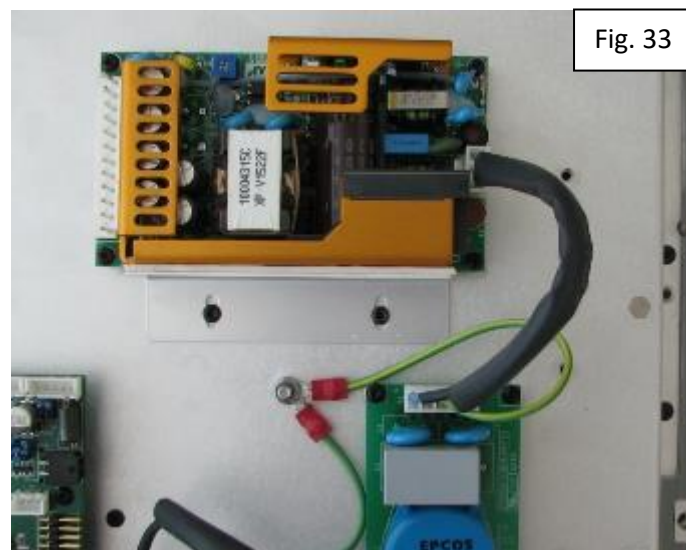
2.44   Fit the 16mm grommet (42EG9408P) over the LVDS and LED drive cables.

    2.44.1   Position the individual cabling within the grommet according to the lengths you require.

Fig. 34
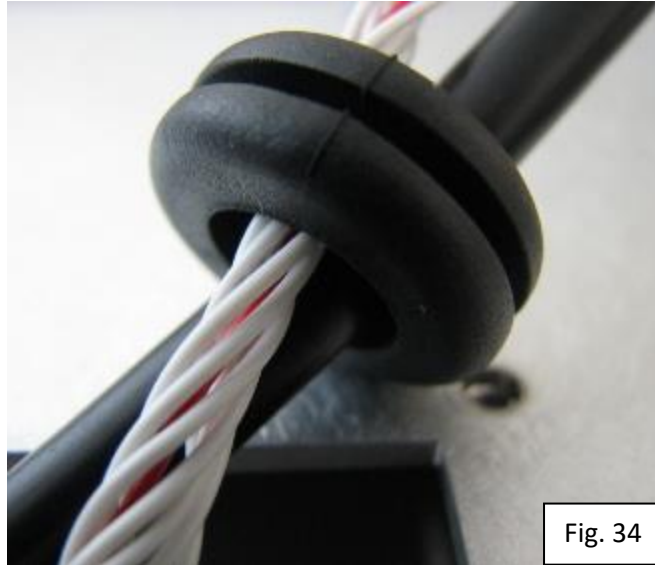
2.45   Feed the cables through the LVDS blanking plate (LFB1) and press the grommet into the hole.

    2.45.1   Now secure LFB1 using six M3x6mm B/H screws.

Fig. 35

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2.46   According to the narrations below (which correspond to the BOM narrations) plug the following lead assemblies as specified and dress accordingly.

     2.46.1   55FP0197P-MOD-C

     2.46.1.1   LED1/CON2

     2.46.1.2   LED1/CON3 (MARKED HOUSING)

Fig. 36

     2.46.2   31PR1195P

     2.46.2.1   DRI1/J3

Fig. 37
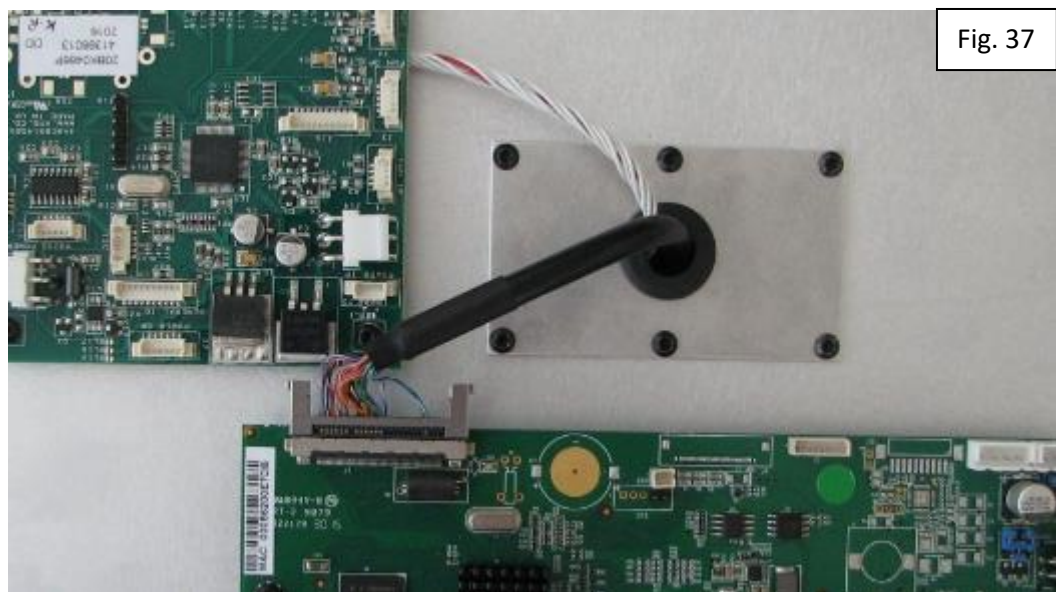
2.46.3   30PH2545P (*Use 30PH1735P-B in conjunction with this assembly*)

2.46.3.1   14W – LED1/CON1

2.46.3.2   5W – MIC1/J3

2.46.3.3   10W – MIC1/J8

2.46.3.4   PSU1/J2 RED – pin 3

2.46.3.5   PSU1/J2 RED – pin 4

2.46.3.6   PSU1/J2 BLK – pin 7

2.46.3.7   PSU1/J2 BLK – pin 8

Fig. 38
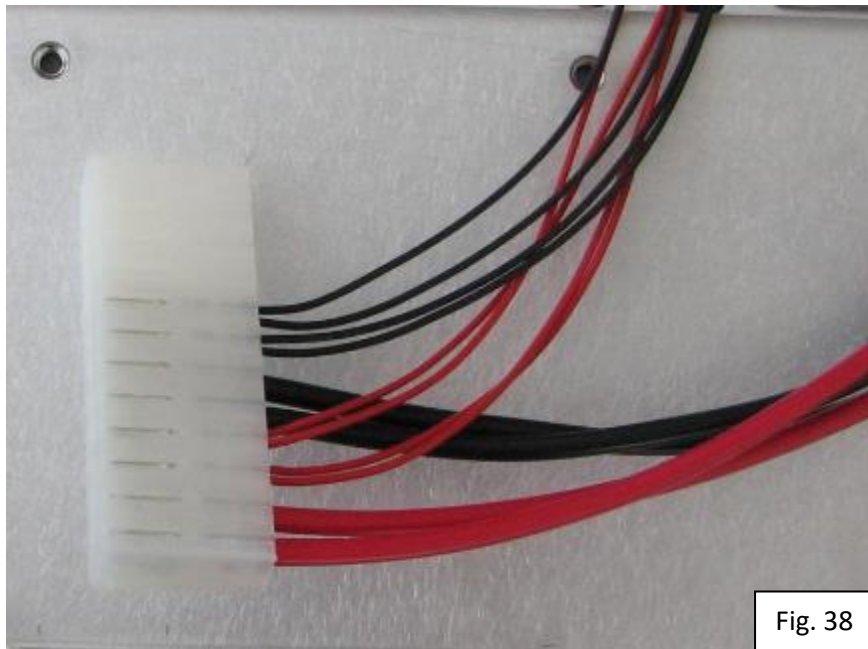
2.46.4   30PH1735P-B

2.46.4.1   12W – PSU1/J2

2.46.4.2   2W – DRI1/PP2

2.46.4.3   3W – MIC1/J14

Fig. 39
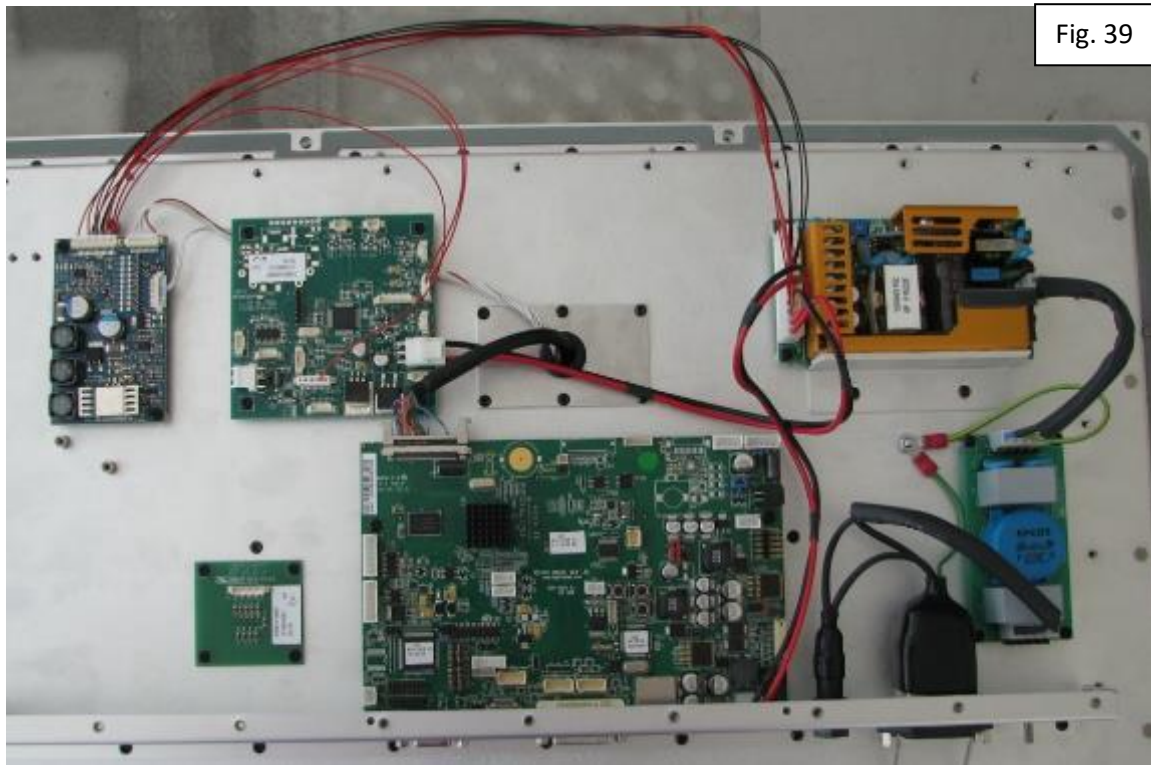
2.46.5   30PH2544P

2.46.5.1   10W – OSD1/J15

2.46.5.2   12W – DRI1/CNC1

2.46.5.3   CMP – MIC1/J3 – pin 2

2.46.5.4   3W – MIC1/J2 (MARKED RED HOUSING)

2.46.5.5   3W – MIC1/J5 (MARKED BLK HOSUING)

2.46.5.6   3W – MIC1/J6

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Fig. 40
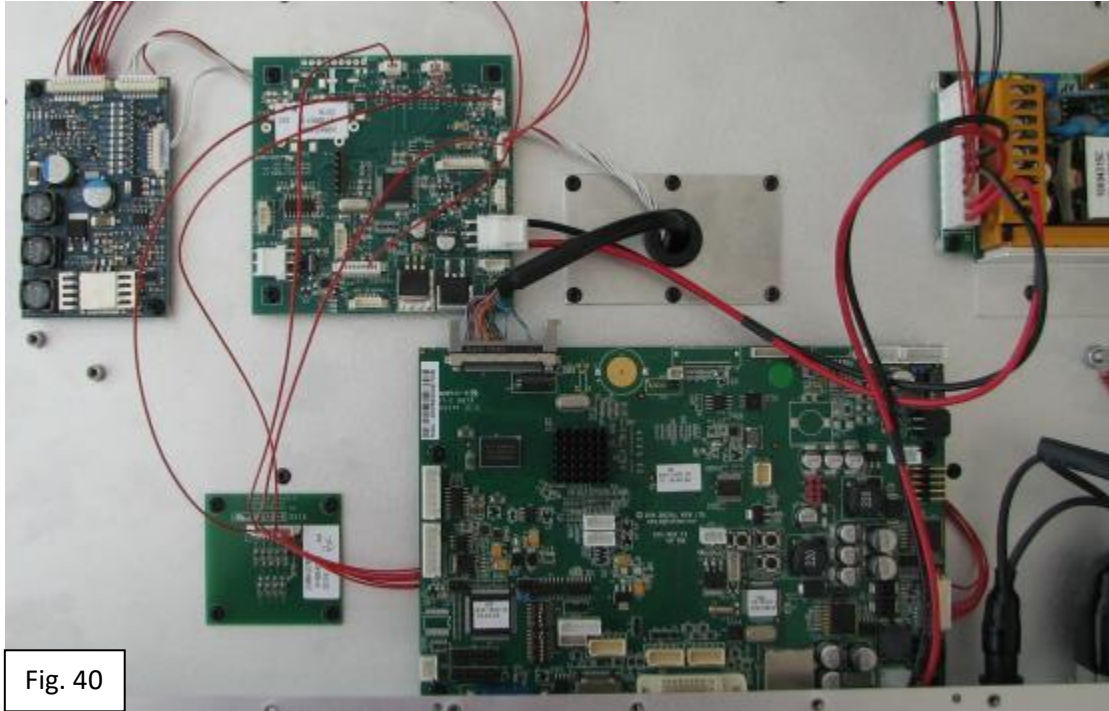
2.46.6   30PH1785P-A

2.46.6.1   DRI1/CNB1 – MIC1/J8 – pin 9

Fig. 41
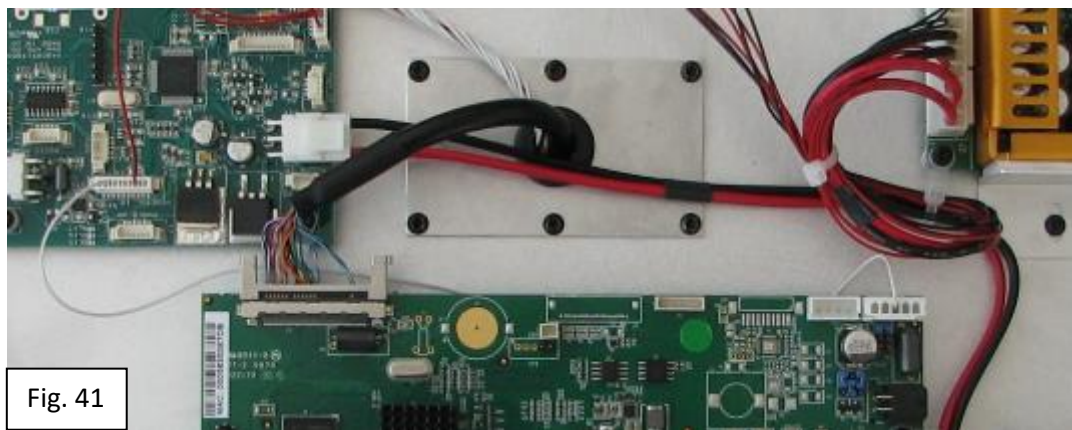
2.47   The monitor is now ready to be passed onto the test department.

27

3. FINAL TEST PROCEDURE

This procedure acts as an illustrated record of every check carried out in the process of testing and assuring quality approval.

The contents of this test procedure should be carried out only by adequately qualified testers/inspectors.

In the event of any deviation from a specified test or expected outcome, cease the test immediately and action the reject procedure '**TQ0006**', documenting the failure on the History route card (**30PB0500A**). The monitor must be placed in the designated reject area. Upon return of any completed rejects, the monitor should undergo a full test from the beginning of the section it failed.

3.1 Before the unit can begin the test procedure, check that the pre-requisite section on the route card (section 2.46) has been signed off proving completion up to the required status.

KEY		TAB 3
ABBREVIATED FORM	**DESCRIPTION**	**PART NUMBER**
DRI1	Driver board	21LD0044P/1
FIL1	Mains filter	20BK0386P/1
LED1	LED driver	31PR1194P-A
MEM1	OSD Membrane	31PR1186P
MIC1	Micro-controller	20BK0486P
OSD1	Membrane filter	20BK0766P
PSU1	AC – 12VDC PSU	31PR0351P
TFT1	24" LED panel	55FP0197P-MOD-C

3.2 See **29LR244WA####-M** BOM for further details or specifics regarding materials that may assist in the test process.

3.3 Now record the U27 information on the route card, these are found on the label highlighted in yellow on figure 28.

    3.3.1 Part number

    3.3.2 Version number

3.4 Before beginning test process, check that MIC1 has had the correct solder slot adjustments.

    3.4.1 S/C = SL6, SL7, SL18, SL19, SL20

    3.4.2 O/C = SL4, SL9, SL12

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3.5 Carry out the DRI1 jumper and switch setup process.

 3.5.1 Jumper settings

  3.5.1.1 JA2; 1-2 & 3-4,

  3.5.1.2 JA3; 5V,

  3.5.1.3 JA5; 1-3 & 2-4,

  3.5.1.4 JA6; 1-3 & 2-4,

  3.5.1.5 JP6; C/C

 3.5.2 Switch Settings

  3.5.2.1 SW3; ON, OFF, OFF, OFF, OFF, OFF, OFF, ON.

  3.5.2.2 SW4; OFF, OFF, ON, ON, OFF, OFF.

3.6 Use mains power cable '**70KA4039S**' to test '**240VAC @50Hz**'.

3.7 Attach VGA cable '**31PR0016HP-2**' between a PC and VGA connector '**P1**' on the monitor.

3.8 Attach DVI cable '**31PR0647P-1**' between a PC and DVI connector '**P2**' on the monitor.

3.9 Attach HDMI cable '**31PR1169P**' between a PC and HDMI connector '**P3**' on the monitor.

3.10 Attach an Ethernet cable '**31PC0034P**' between a PC and CONC connector '**J2**' on the monitor.

3.11 Switch power to monitor via PSU to **ON**.

3.12 Connect the PIC micro-controller programmer to **J10** on MIC1 and download the code '**30PL0428A**' called up on the BOM.

3.13 Switch power to monitor via the mains to **OFF**.

3.14 Switch power to monitor via PSU to **ON**.

3.15 On the connected PC's for all inputs, setup the resolution of the connected display to SXGA '**1280 x 1024**'.

3.16 Verify the VGA signal displays a correct image from the connected PC.

3.17 Remove the VGA cable and verify the DVI signal displays a correct image from the connected PC.

3.18 Remove the DVI cable and verify the HDMI signal displays a correct image from the connected PC.

3.19 Replace the DVI cable and verify that the re-introduced signal returns correctly.

3.20   Replace the VGA cable and verify that the re-introduced signal returns correctly.

3.21   On the connected PC's for all inputs, setup the resolution of the connected display to UXGA '*1600 x 1200*'.

3.22   Verify the VGA signal displays a correct image from the connected PC.

3.23   Remove the VGA cable and verify the DVI signal displays a correct image from the connected PC.

3.24   Remove the DVI cable and verify the HDMI signal displays a correct image from the connected PC.

3.25   Replace the DVI cable and verify that the re-introduced signal returns correctly.

3.26   Replace the VGA cable and verify that the re-introduced signal returns correctly.

3.27   On the connected PC's for all inputs, setup the resolution of the connected display to FULL HD '*1920 x 1080*'.

3.28   Verify the VGA signal displays a correct image from the connected PC.

3.29   Remove the VGA cable and verify the DVI signal displays a correct image from the connected PC.

3.30   Remove the DVI cable and verify the HDMI signal displays a correct image from the connected PC.

3.31   Replace the DVI cable and verify that the re-introduced signal returns correctly.

3.32   Replace the VGA cable and verify that the re-introduced signal returns correctly.

3.33   Test the control over network connection 'CONC' according to the information detailed within the below link.

    3.33.1   S:\Production\SVX Testing Program

3.34   Press and hold the power switch and put monitor into standby.

    3.34.1   The monitor backlights should go **OFF**.

    3.34.2   The standby LED should be **OFF**.

3.35   Press the standby switch to bring monitor back **ON**.

3.36   Test the backlight brightness minus button.

    3.36.1   The backlights should dim to zero.

    3.36.2   The standby LED should dim 5%.

        3.36.2.1   Take light meter (**LX001**) and monitor into EMC Chamber.

3.36.2.2   Turn backlight brightness to maximum.

3.36.2.3   Measure LED with light meter and record max. brightness on **30PB####B**.

3.36.2.4   Turn backlight brightness to minimum.

3.36.2.5   Measure LED with light meter and record min. brightness on **30PB####B**.

3.36.2.6   Min. brightness should be 5% of the maximum brightness (±2%). Record this value on **30PB####B**.

3.37   Test the backlight brightness plus button, ensuring the backlights and standby LED brighten together.

3.38   Test the membrane OSD functionality works in its entirety.

3.39   Assign shortcut keys for quick access contrast control on the membrane.

3.40   Disable any signals that are not brought out for use on the monitor.

3.41   Carry out a grey scale test to ensure no abnormalities in the image are present, the grey scale should be linear.

3.42   Using a peak white field, with the brightness and contrast set to 100%, check that the luminance is >250cd/m^2. Return brightness and contrast to default settings.

3.43   Switch Power to monitor to **OFF**.

3.44   Introduce an AC-DC inverter into the input in order to test '**110VAC @60Hz**'

3.45   Switch Power to monitor to **ON**.

3.46   Using a peak white field, check that the luminance does not differ greatly from the previous reading.

3.47   Switch Power to monitor to **OFF**.

3.48   Once the unit has been tested to completion, passing all relevant criteria sign off the necessary sections on all accompanying paperwork proving finished status.

4. FINAL MONITOR CASING

PROCEDURE KIT LIST			TAB 4
PART NUMBER	DESCRIPTION	IDENTIFICATION	QTY
34DD0218-27-1-1/A	CABLE SECURING BRACKET	CSB1	1
34DD0335-3-1/B	24" FRONT BEZEL COMPLETE TO STAGE 3	FB1	1
34DD0335-3-3/B	24" WIDE REAR COVER	RC1	1
40SA4BH1M03-006BTL	A4 SS M3x6 B/H TRX BLK TUFLOK		19
40SA4BH1M03-010BTL	A4 SS M3x10 B/H TRX BLK TUFLOK		3
40SA4CS1M03-006BTL	A4 SS M3X6 C/S TRX BLK TUFLOK		13
LA0017P	Si ADHESIVE SEALANT		0.02

4.1 Before the unit can begin the final monitor assembly procedure, check that the pre-requisite section on the route card (section 3.48) has been signed off proving completion up to the required status.

4.2 Examine all interior surfaces and features of the monitor to assess general workmanship and quality. In particular, inspect screw fasteners for noticeable damage to tightening interface.

4.3 Inspect the interior of the unit for any foreign objects or debris, remove if found.

4.4 Now using the appropriate tie wraps and three M3x10mm B/H screws (in addition to the four already loosely fitted to MIC1) dress the cables according to figure 42.
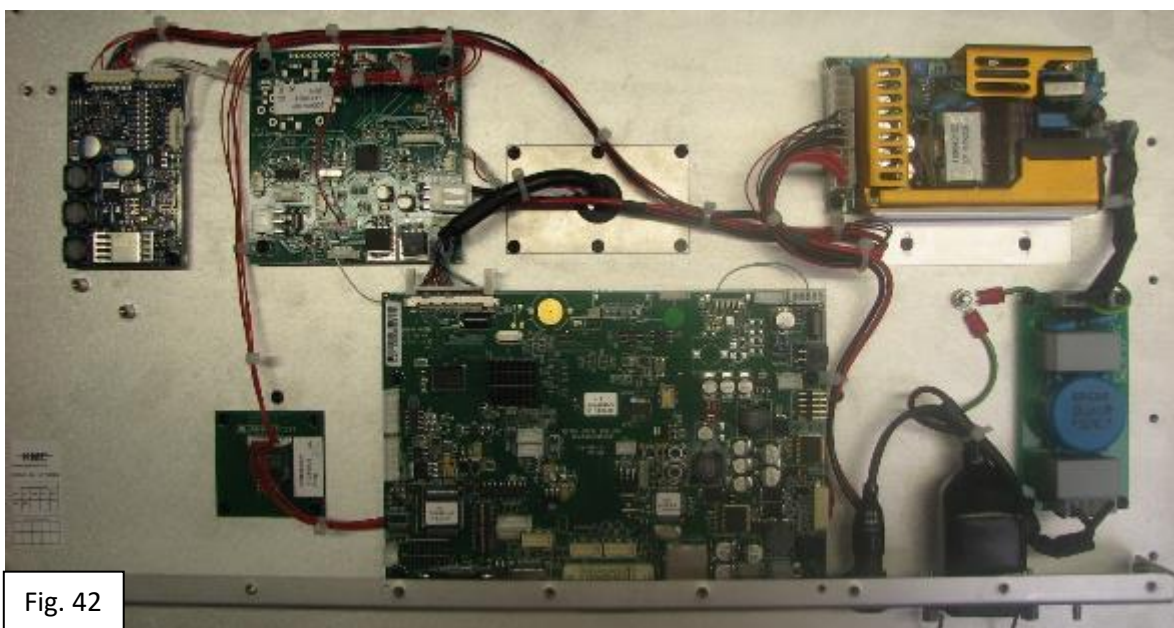
Fig. 42

4.5 Silicon all connections and susceptible components highlighted within the silicon directory '**30PB0413**' and allow curing time according to individual specifications.

4.6 Lower the rear cover (RC1) onto the chassis and secure in place in the following manner.

   4.6.1 Use thirteen M3x6mm C/S screws in order to secure RC1 onto CP1.

   4.6.2 Use nineteen M3x6mm B/H screws in order to secure RC1 onto CHS1.

4.7 Supply the cable securing bracket (34DD0218-27-1-1/A) unattached with the monitor to QA.

4.8 The monitor is now ready to be passed onto the QA department.

5. QUALITY PROCEDURE

This procedure acts as an illustrated record of every check carried out in the process of assuring quality approval.

The contents of this test procedure should be carried out only by adequately qualified testers/inspectors.

In the event of any deviation from a specified test or expected outcome, cease the test immediately and action the reject procedure '**TQ0006**', documenting the failure on the History route card (**30PB0500A**). The monitor must be placed in the designated reject area. Upon return of any completed rejects, the monitor should undergo a full test from the beginning of the section it failed.

Only products passing KME test document '**30BG####C**' will be shipped to the customer. All products shipped to the customer will be accompanied by a KME certificate of conformity quoting the product serial number(s).

5.1 Before the unit can begin the test procedure, check that the pre-requisite section on the build route card (section 4.6.2) has been signed off proving completion up to the required status.

5.2 Weigh the display and confirm the mass is less than **10.00kg** (Record to two decimal places in the route card).

5.3 Carry out a visual inspection of all connectors to confirm integrity.

5.4 Mount the cable securing bracket (34DD0218-27-1-1/A) beneath the HDMI connector using two M3x6mm B/H screws with the securing face closest to the connector socket.

5.5 Remove the protective film placed on the front cover during production.

5.6 Carry out a visual check on the screen for any imperfections. The display shall not visibly show any dust, smears or other marks on the screen. Any defects should be within the limits allowed by the below documents.

   5.6.1 Glass Inspection Specification (*OIS/4.02 Optical Inspection Standard*)
   S:\QA\Glass Specs

5.7 Examine the front cover metalwork for any imperfections. Confirm there are no dents or deformations in the surface finish.

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5.8 On the front cover, confirm that the following design aspects are present and have been manufactured correctly.

   5.8.1 The four heli-coils are present.

   5.8.2 The two location pilot pins are present (on rear of the front).

   5.8.3 The ten captive screw holes have been sufficiently threaded.

5.9 Inspect the rear cover and make sure there are no imperfections. Confirm there are no dents or deformations in the surface finish.

5.10 Confirm that the EMI gasket has been appropriately fitted on the backside of the front bezel and the integrity is intact.

5.11 Verify all screws are present checking that there is no noticeable damage to that of the screws and the surrounding area.

5.12 Ensure that the membrane is located centrally within the recess and that there is no glue visible around the edges of the keypad.

5.13 Carry out the following dimensional checks.

   5.13.1 Height = 392mm (±0.125mm)

   5.13.2 Width = 601mm (±0.125mm)

   5.13.3 Bezel Thickness = 12mm (±0.125mm)

   5.13.4 Total Depth:

   5.13.4.1 Chassis = 22.3mm (±0.2mm)

   5.13.4.2 Rear cover = 45mm (±0.2mm)

5.14 Use mains power cable '**70KA4039S**' to test '**240VAC @50Hz**'.

5.15 Attach VGA cable '**31PR0016HP-2**' between a PC and VGA connector '**P1**' on the monitor.

5.16 Attach DVI cable '**31PR0647P-1**' between a PC and DVI connector '**P2**' on the monitor.

5.17 Attach HDMI cable '**31PR1169P**' between a PC and HDMI connector '**P3**' on the monitor.

5.18 Attach an Ethernet cable '**31PC0034P**' between a PC and CONC connector '**J2**' on the monitor.

5.19 Switch power to monitor via mains to **ON**.

5.20 On the connected PC's for all inputs, setup the resolution of the connected display to SXGA '*1280 x 1024*'.

5.21 Verify the VGA signal displays a correct image from the connected PC.

5.22 Remove the VGA cable and verify the DVI signal displays a correct image from the connected PC.

5.23 Remove the DVI cable and verify the HDMI signal displays a correct image from the connected PC.

5.24 Replace the DVI cable and verify that the re-introduced signal returns correctly.

5.25 Replace the VGA cable and verify that the re-introduced signal returns correctly.

5.26 On the connected PC's for all inputs, setup the resolution of the connected display to UXGA '*1600 x 1200*'.

5.27 Verify the VGA signal displays a correct image from the connected PC.

5.28 Remove the VGA cable and verify the DVI signal displays a correct image from the connected PC.

5.29 Remove the DVI cable and verify the HDMI signal displays a correct image from the connected PC.

5.30 Replace the DVI cable and verify that the re-introduced signal returns correctly.

5.31 Replace the VGA cable and verify that the re-introduced signal returns correctly.

5.32 On the connected PC's for all inputs, setup the resolution of the connected display to FULL HD '*1920 x 1080*'.

5.33 Verify the VGA signal displays a correct image from the connected PC.

5.34 Remove the VGA cable and verify the DVI signal displays a correct image from the connected PC.

5.35 Remove the DVI cable and verify the HDMI signal displays a correct image from the connected PC.

5.36 Replace the DVI cable and verify that the re-introduced signal returns correctly.

5.37 Replace the VGA cable and verify that the re-introduced signal returns correctly.

5.38   Test the control over network connection 'CONC' according to the information detailed within the below link.

    5.38.1   [S:\Production\SVX Testing Program](#)

5.39   Press and hold the power switch and put monitor into standby.

    5.39.1   The monitor backlights should go **OFF**.

    5.39.2   The standby LED should be **OFF**.

5.40   Press the standby switch to bring monitor back **ON**.

5.41   Test the backlight brightness minus button.

    5.41.1   The backlights should dim to zero.

    5.41.2   The standby LED should dim 5%.

    5.41.2.1   Take light meter (**LX001**) and monitor into EMC Chamber.

    5.41.2.2   Turn backlight brightness to maximum.

    5.41.2.3   Measure LED with light meter at max. brightness.

    5.41.2.4   Turn backlight brightness to minimum.

    5.41.2.5   Measure LED with light meter at min. brightness.

    5.41.2.6   Min. brightness should be 5% of the maximum brightness (±2%).

5.42   Test the backlight brightness plus button, ensuring the backlights and standby LED brighten together.

5.43   Test the membrane OSD functionality works in its entirety including contrast shortcut keys.

5.44   Using a peak white field with the brightness and contrast set to 100%, check that the luminance is >250cd/m^2 (Record to one decimal place on the route card). Return brightness and contrast to default settings.

5.45   With a full white image present, carry out a visual check on the screen for any imperfections. The display shall not visibly show any dust, smears or other marks on the screen.

5.46   With a full white image present, perform a visual inspection of the active area displaying the image, to check for dark pixel defects. Then with a full black image check for bright pixel defects. Any defects should be within the limits allowed by the below document.

    5.46.1   ISO_9241-307_2008(en)   [S:\ISO9001\ISO standards](#)

5.47   Switch Power to monitor to **OFF**.

5.48   Clean the screen.

5.49   Clean the front cover metalwork.

5.50   Clean the rear cover metalwork.

5.51   Apply all respective labels according to their individual parameters listed within the below table.

| LABEL INDEX		TAB 5
LABEL PART No.	**LABEL DESCRIPTION**	**LABEL POSTION**
34CA0254-P	MAIN IDENT LABEL	Apply according to ident 'A' on figure 43
34CA0258	LABEL CE MARK	Apply according to ident 'B' on figure 43
34CA0367P	WEEE LABEL	Apply according to ident 'C' on figure 43
34CA0384P	RoHS LABEL	Apply according to ident 'D' on figure 43
34CA0443P	EARTH LABEL	Apply according to ident 'E' on figure 43
34CA1464P	QA LABEL	Apply according to ident 'F' on figure 43
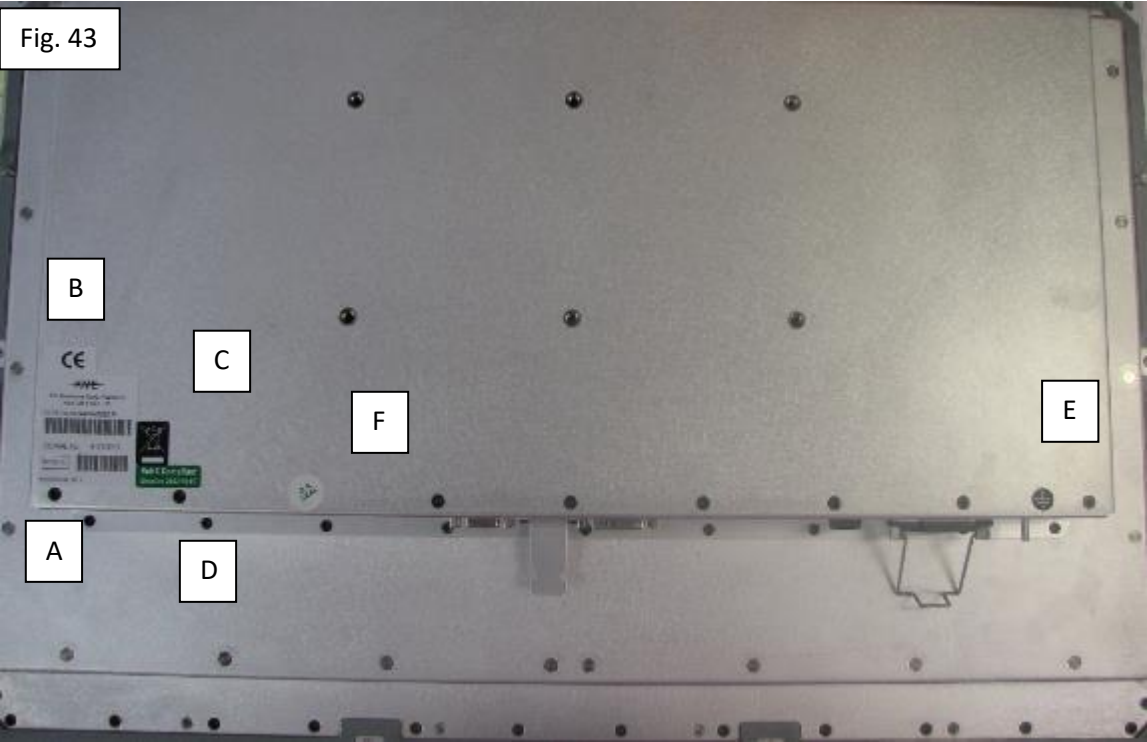
Fig. 43
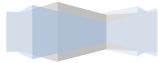
5.52   Fit new protective plastic film.

5.53   Supply '**31PR0016HP-2**' VGA cable with the monitor to the customer.

5.54   Supply ten '**34DD0335-3-7-1/A**' with the monitor to the customer.

5.55   Check the BOM for the latest revision of the manual '**LGA0060**', this needs to be supplied with the monitor.

5.56   Consign unit into stock and forward onto despatch in appropriate manner.

5.57   Once the unit has been tested to completion, passing all relevant criteria sign off the necessary sections on all accompanying paperwork proving finished status.

5.58   The route card must have a QA inspection carried out to ensure correct completion.