

E5061B-11

S E R V I C E N O T E

Supersedes:
NONE

E5061B ENA Series Network Analyzer

Serial Numbers: MY49100000-MY49199999, MY49200000-MY49299999, MY49300000-MY49305421, SG49100000-SG49199999, SG49200000-SG49299999, SG49300001-SG49300054

E5061B LCD Touch Panel Display Assembly Replacement Part Change

Parts Required:

P/N	Description	Qty.
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[For E5061B – Opt 3L5 – See Table 1-1](#)

[For E5061B – Opt 115 to 237 – See Table 2-1](#)

ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION:	
INFORMATION ONLY	
<input type="checkbox"/> Calibration Required	PRODUCT LINE: WN
<input checked="" type="checkbox"/> Calibration NOT Required	AUTHOR: LS
ADDITIONAL INFORMATION: This service note communicates the support parts strategy for E5061B LCD Touch Panel display assembly.	

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Agilent Technologies

For E5061B – (Opt 3L5)**Situation:**

For E5061B, due to the part discontinuance by LCD display manufacturer, the **E5061-60111 LCD-Touch Panel Assembly** (with LCD Display with CCFL backlight) is no longer supplied.

The replacing part would be an LCD Touch Panel Display Assembly with LED backlight. In ensuring hardware compatibilities, there would be a list of associated parts required to be replaced whenever the LCD T/P assembly (LCD Display with CCFL backlight) is defective.

Solution/Action (For E5061B Opt 3L5)**For defective LCD T/P Assembly E5061-60111**

In summary, whenever LCD T/P E5061-60111 is identified defective, replace the following parts altogether as they are mutually dependent:

1. LCD T/P assembly (with LED backlight display),
2. Inverter
3. Front Panel (label, panel sub, shield)
4. Cable assemblies,
5. Screws etc.

In this case, apart from replacing the LCD T/P assembly with the replacement part, the inverter is required to be replaced in ensuring the compatibility with the new LCD T/P assembly (with LED backlight). Front panel needs to be replaced as the dimension and the new LCD T/P assembly screw size and location differs on the new LCD T/P display assembly (with LED backlight). Refer to table 1-1 for details.

For other failures (other than LCD T/P assembly E5061-60111)

If the defective part does not include LCD Touch Panel Assembly, proceed to replace the individual defective parts directly as usual. For instances, if the inverter 0950-4420 is found to be defective, replace the inverter alone will be sufficient. Similar applies to Touch Panel controller. Those parts are continuously supported and supplied until further notice. Refer to service guide for detailed instructions.

LCD Removal

Refer to E5061B Service Guide (Chapter 4- Replacement Procedure → LCD Assembly Replacement) for the step-by-step procedure.

Front Panel Interface Board/ Keypad Removal

Refer to E5061B Service Guide (Chapter 4- Replacement Procedure → A52 Front Panel Interface Boards/ Key Pad Replacement) for the detailed procedure.

Power Switch Assembly Replacement

Refer to E5061B Service Guide (Chapter 4 → Power Switch Assembly Replacement for detailed instructions.

Note: Kindly take note to keep the original parts as some of the assemblies are reusable and replacement is not necessary.

Table 1-1 Defective LCD T/P Assemblies - Support part strategy.

Table 1-1 depicts the support PN replacement strategy and their dependencies.

Identified Defective Part	Types	Current PN	Description	Qty.	New PN	Description	Qty.	Remarks
Inverter (0950-4420)	Assemblies, Modules	0950-4420	Inverter	1	0950-5396	Inverter	1	Direct replacement
Touch Panel Controller (0960-2972)	Assemblies, Modules	0960-2972/ 5012-8672 (Refer to E5061B-05 SN for details)	Touch Panel Controller	1	0960-2972/ 5012-8672 (Refer to E5061B-05 SN for details)	Touch Panel Controller	1	Direct Replacement
LCD Touch Panel Assembly (E5061-6011)	Assemblies, Modules	E5061-6011	LCD Touch Panel Assembly	1	E5061-60112	LCD Touch Panel Assembly (With LED backlight)	1	Replace set
		E5061-00212	Panel, Front Sub (All Opt)	1	E5061-00232	Panel, Front Sub (All Opt)	1	Replace set
		E5061-00611	Cover Shield, Front Assembly	1	E5061-00612	Cover Shield, Front Assembly	1	Replace set
		E5061-00215 (Opt 3L5)	Front Panel	1	E5061-00215 (Opt 3L5)	Front Panel	1	Common
		<i>E5061-00211 (Opt 115 to 235)</i>			<i>E5061-00211 (Opt 115 to 235)</i>			
		<i>E5061-00211 (Opt 117 to 237)</i>			<i>E5061-00211 (Opt 117 to 237)</i>			
		0950-4420	Inverter	1	0950-5396	Inverter	1	Replace set
		E5061-00602	Inverter Bracket/ Plate	1	E5071-01241	Inverter Bracket/ Plate	1	Replace set
		E5061-87113 (Opt 3L5)	Label (Frequency label)	1	E5061-87113 (Opt 3L5)	Label (Frequency label)	1	Common
<i>E5061-87111 (Opt 215, 117, 115,</i>	<i>E5061-87111 (Opt 215, 117, 115,</i>							

		217)			217)		
		E5061-87112 (Opt 235, 137, 135, 237)			E5061-87112 (Opt 235, 137, 135, 237)		
		0960-2972/ 5012-8672 (Refer to E5061B-05 SN for details)	Touch Panel Controller	1	0960-2972/ 5012-8672 (Refer to E5061B-05 SN for details)	Touch Panel Controller	1 Common
		E5061-66652 (Opt 3L5)	Printed Circuit Board Assembly, Pb-free ENA-L Front Panel Interface, With Probe Power	1	E5061-66652 (Opt 3L5)	Printed Circuit Board Assembly, Pb-free ENA-L Front Panel Interface, With Probe Power	1 Common
		E5061-66662 (Opt 115 to 237)	Printed Circuit Board Assembly, Pb-free ENA-L Front Panel Interface, without Probe Power		E5061-66662 (Opt 115 to 237)	Printed Circuit Board Assembly, Pb-free ENA-L Front Panel Interface, without Probe Power	
	Cables	E5061-61633	LCD Display - Flat Cable assembly	1	E5070-61699	LCD Display - Flat Cable assembly	1 Replace set
		E5071-61608	Wire assembly, (Inverter to PCA Keyboard)	1	E5061-61654	Wire assembly, LED Driver (Inverter to PCA Keyboard)	1 Replace set
		(None)	(None) Original cable is pre-fitted with LCD T/P assembly	-	E5061-61653	Wire assembly, (Display backlight power)	1 New
		E5061-61651	Wire assembly, (From T/P controller to clip)	1	E5061-61651	Wire assembly, (From T/P controller to clip)	1 Common
		E5061-61627	Power Switch Cable Assembly	1	E5061-61627	Power Switch Cable Assembly	1 Common
	Gasket	0363-0170	RFI-Gasket Strip-Fingers	59	0363-0170	RFI-Gasket Strip-Fingers	59 Common
	Cable Tie	1400-0249	Cable tie (To tie the display cable assembly and Power	1	1400-0249	Cable tie (To tie the display cable assembly and Power Switch	1 Common

		Switch Cable)			Cable)		
Cable Clamp	(None)	Cable Clamp (Back of the LCD T/P Assembly)	-	1400-1334	Cable Clamp (Back of the LCD T/P Assembly)	4	New
	1400-3415	Cable Clamp (Back of the front panel assembly)	1	1400-3415	Cable Clamp (Back of the front panel assembly)	1	Common
	1400-1391	Cable clamp (back of the front panel assembly)	1	1400-1391	Cable clamp (back of the front panel assembly)	1	Common
	1400-3337	Cable clamp (back of the front panel assembly)	1	1400-1391	Cable clamp (back of the front panel assembly)	1	Replace set
	1400-3156	Cable clamp (Back of the front panel assembly)	2	1400-3156	Cable clamp (Back of the front panel assembly)	2	Common
Screws	(None)	Screw M4x0.7 - securing LCD Flat cable assembly	-	0515-5711	Screw M4x0.7 - securing LCD Flat cable assembly	2	New
	0515-1402	Screw M3x0.6 (Back of LCD T/P assembly)	4	0515-0430	Screw M3x0.5 (Back of LCD T/P assembly)	4	Replace set
	0515-0430	Screw M3x0.5 (Back of Front panel assembly cover shield)	6	0515-0430	Screw M3x0.5 (Back of Front panel assembly cover shield)	6	Common
	0515-1974	Screw M2.5.x0.45 (Bottom of inverter – hidden)	2	0515-0430	Screw M3.x0.5 (Bottom of inverter – hidden)	2	Replace set
	0515-1946	Screw M3x0.5 (Top of inverter)	2	0515-1946	Screw M3x0.5 (Top of inverter)	2	Common
	0515-0430	Screw M3x0.5 (On the power switch)	2	0515-0430	Screw M3x0.5 (On the power switch)	2	Common

		0515-0430	Screw M3x0.5 (Front Keyboard PCA)	13	0515-0430	Screw M3x0.5 (Front Keyboard PCA)	13	Common
		0515-1974	Screw M2.5x0.45 (To secure T/P controller board)	2	0515-1974	Screw M2.5x0.45 (To secure T/P controller board)	2	Common

1. Reuse and install the keyboard, keyboard PCA and power switch PCA on the new front panel sub as shown in figure 1-1.

Note: The front panel, panel sub and cover shield are required to be replaced due to dimension changes. Front panel frequency label has to be purchased separately according to unit frequency options.

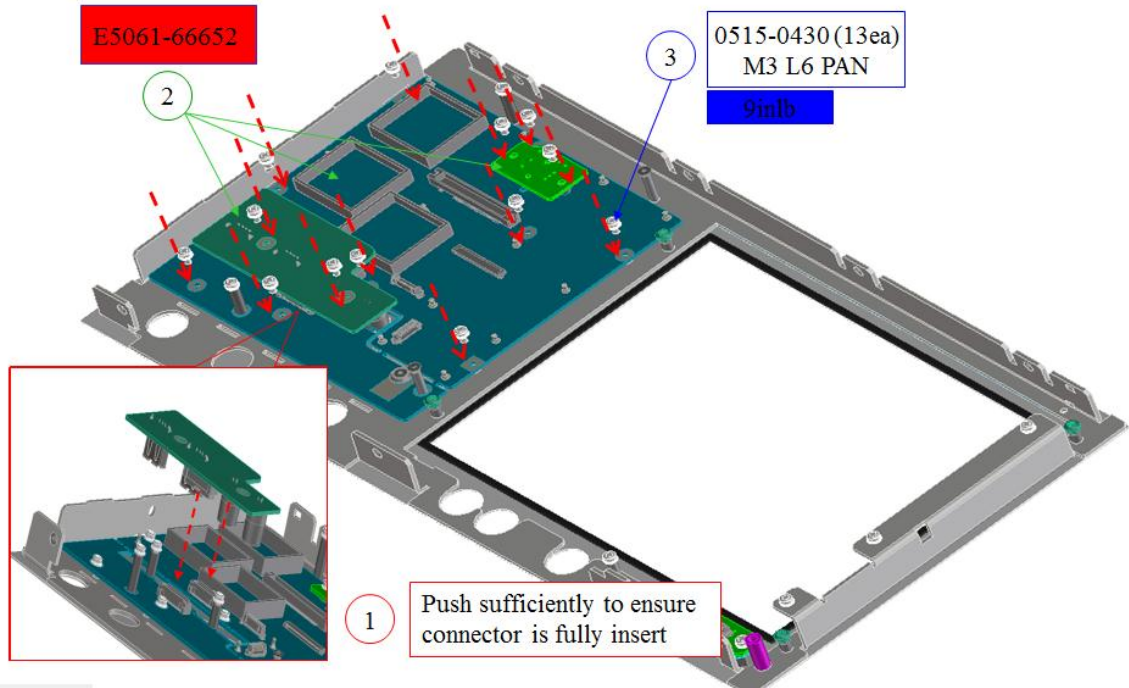


Figure 1-1

2. Install the gaskets as shown in Figure 1-2. Figure 1-3 illustrates the Front panel with the keyboard installed.

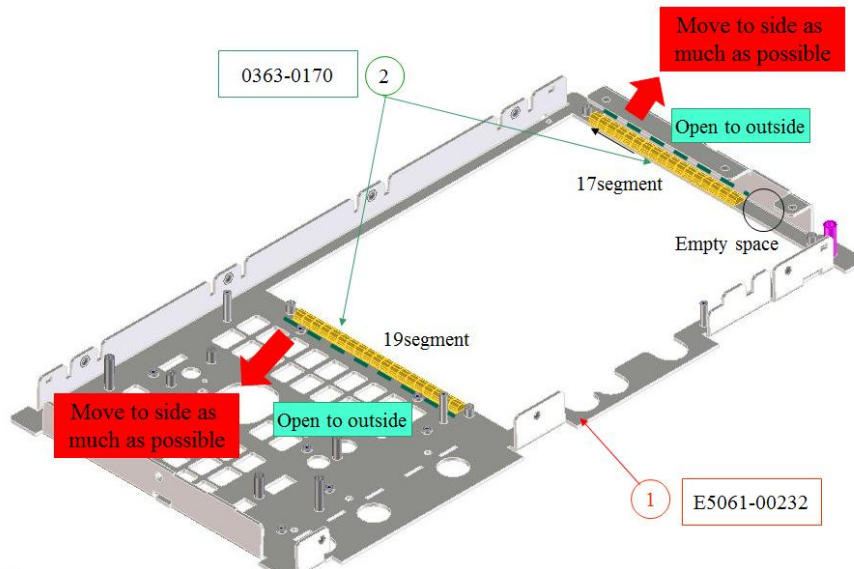


Figure 1-2

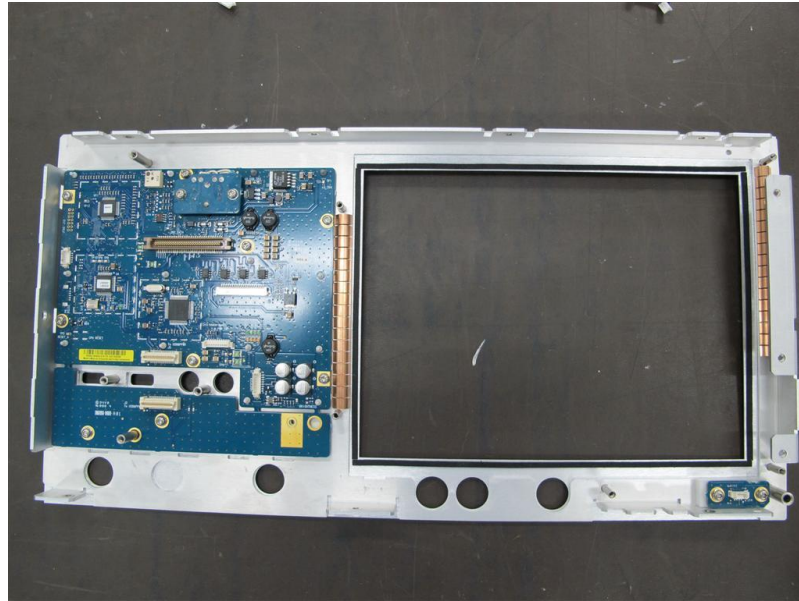


Figure 1-3

3. Install the inverter on the bracket before connect the cable assembly to both ends as shown in figure 1-4

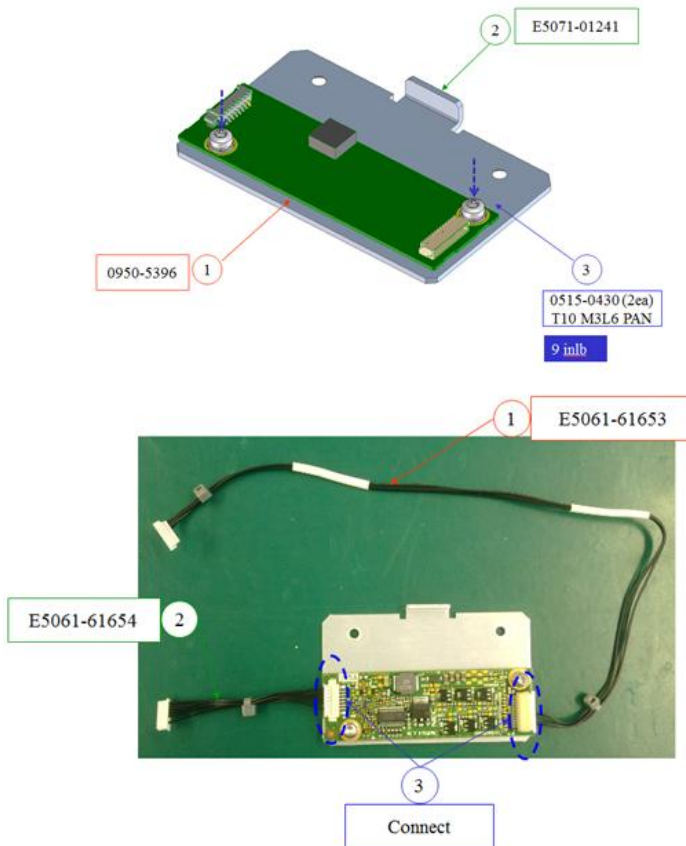


Figure 1-4

6. Install the LCD T/P Display Assembly onto the LCD Front Panel. Fasten the screws according to the following sequence. Connect all cable assemblies as shown in figure 1-7.

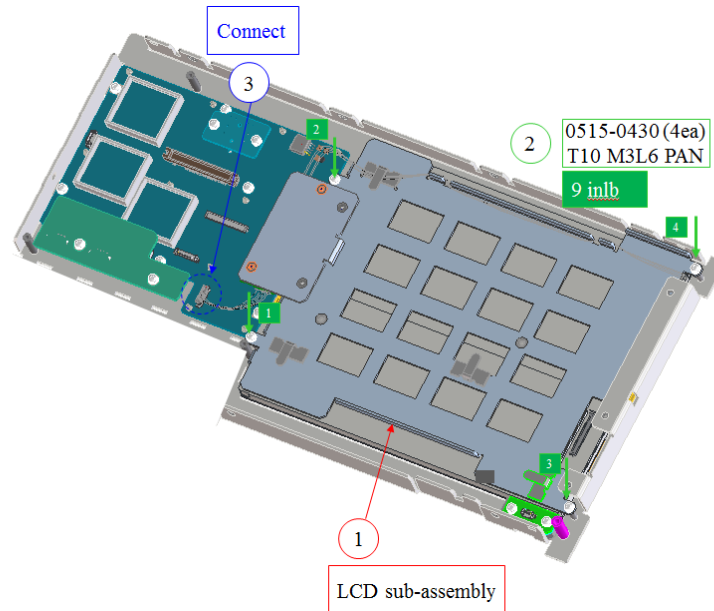


Figure 1-7

7. Connect, route and clamp the power switch cable assembly as shown in figure 1-8

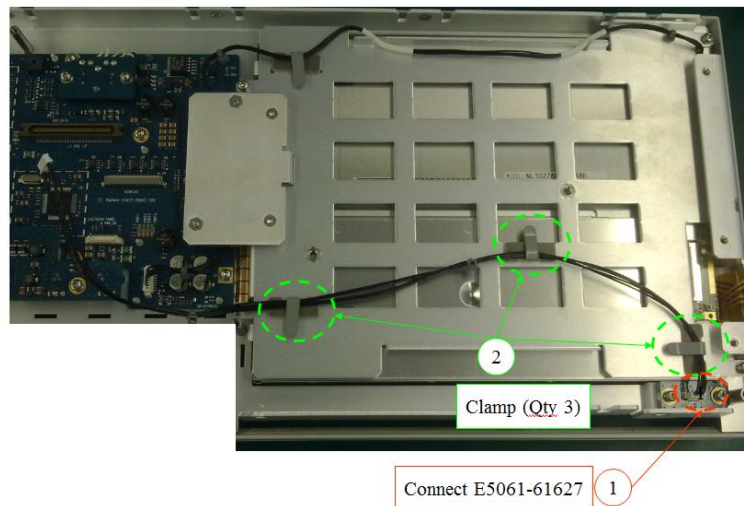


Figure 1-8

- 8. Connect the cable assemblies to the keyboard PCA as shown in figure 1-9.

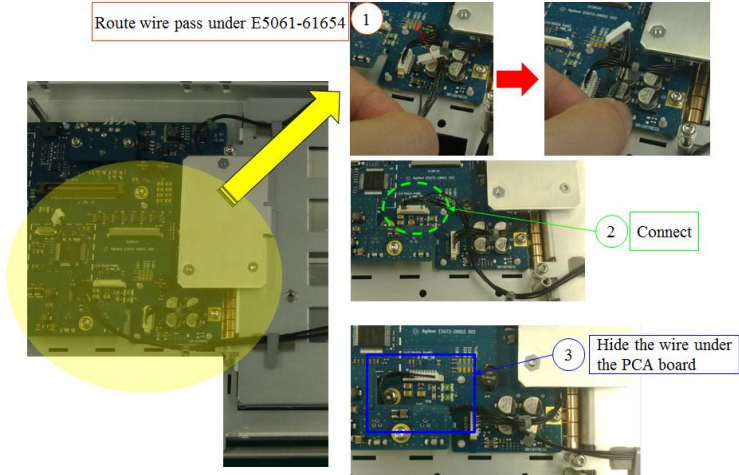


Figure 1-9

- 9. Connect the LCD T/P display cable assembly as shown. Fasten the screws in securing the cable. Tie the LCD T/P Display cable assembly to the Power switch cable assembly as shown in figure 1-10.

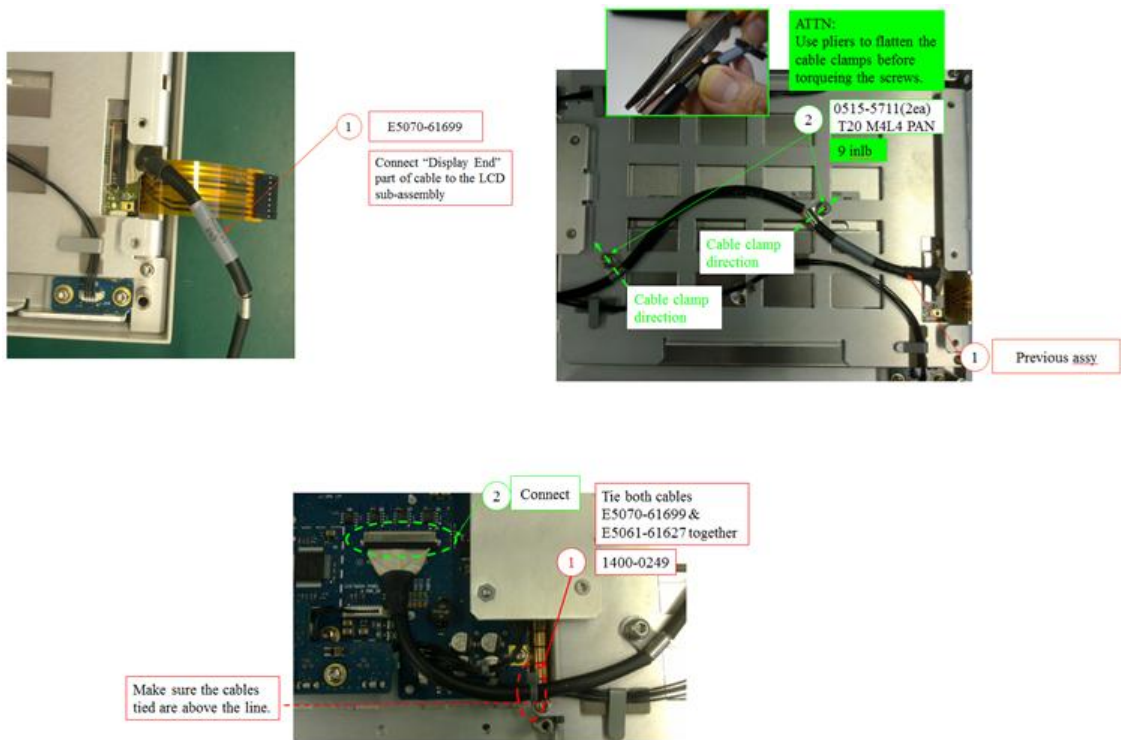


Figure 1-10

- 10. On the Front Panel back cover shield, install the cable clamp as shown in figure 1-11

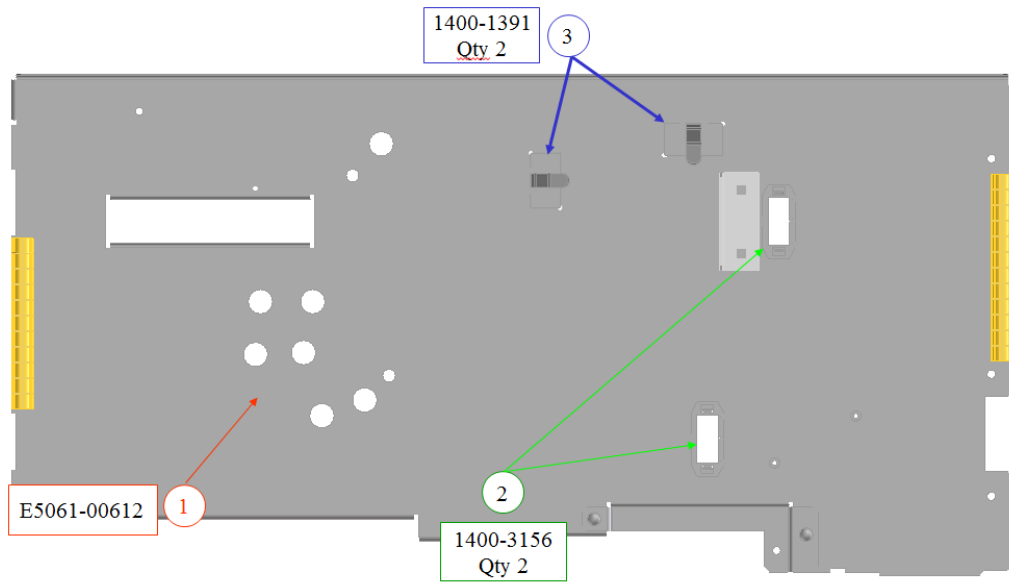


Figure 1-11

11. Install the cable clamps and Gasket (RFI fins) on the back cover as shown in figure 1-12.

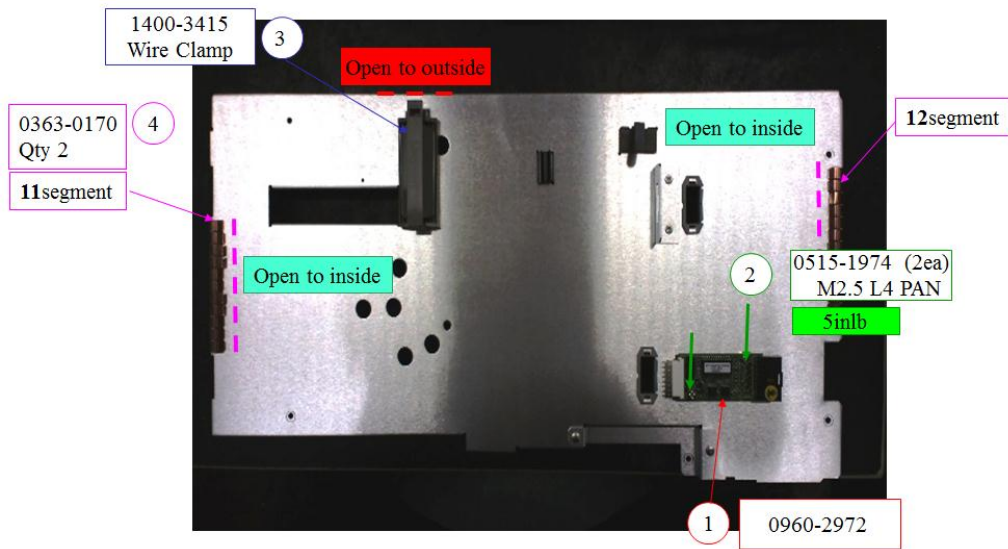


Figure 1-12

12. Install the LCD T/P controller and connect it with cables. Refer to figure 1-13



Figure 1-13

13. Shown would be the completed installation of the assemblies. Kindly ensure the connections of the cable assemblies are good and properly secured. Fasten the six screws in securing the shield (back cover) to the Front Panel Assembly. Refer to figure 1-14 for details.

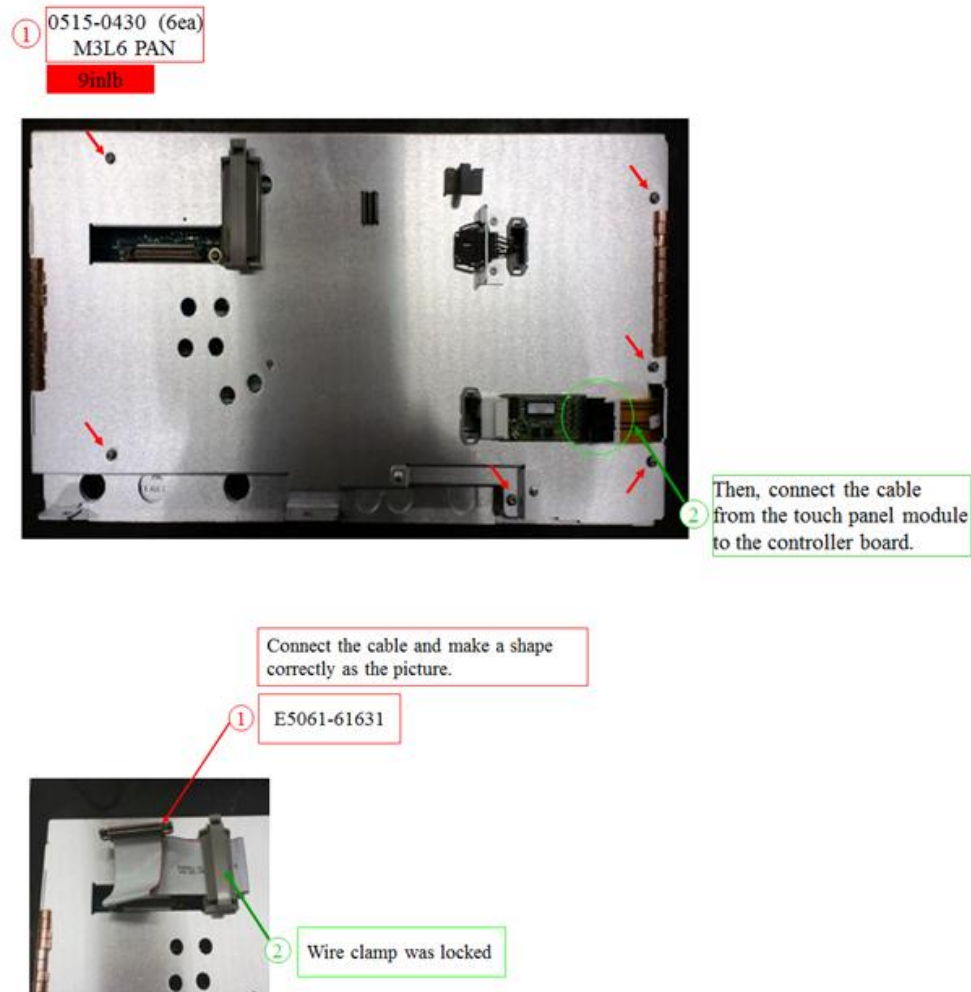


Figure 1-14

Post-repair requirements

Reinstall the front panel assembly by inverse procedure of removal.

Perform Touch Screen calibration and inspect on booting process. Execute the diagnostics test in verifying the functionality of Touch Panel and LCD display.

Refer to E5061B Service guide Chapter 4 Post-Repair Procedures for detailed instructions.

For E5061B – (Opt 115 to 237)**Situation:**

For E5061B, due to the part discontinuance by LCD display manufacturer, the **E5061-60111 LCD-Touch Panel Assembly** (with LCD Display with CCFL backlight) is no longer supplied.

The replacing part would be an LCD Touch Panel Display Assembly with LED backlight. In ensuring hardware compatibilities, there would be a list of associated parts required to be replaced whenever the LCD T/P assembly (LCD Display with CCFL backlight) is defective.

Solution/Action (For E5061B Opt 115 to 237)**For defective LCD T/P Assembly E5061-60111**

In summary, whenever LCD T/P E5061-60111 is identified defective, replace the following parts altogether as they are mutually dependent:

1. LCD T/P assembly (with LED backlight display),
2. Inverter
3. Front Panel (label, panel sub, shield)
4. Cable assemblies,
5. Screws etc.

In this case, apart from replacing the LCD T/P assembly with the replacement part, the inverter is required to be replaced in ensuring the compatibility with the new LCD T/P assembly (with LED backlight). Front panel needs to be replaced as the dimension and the new LCD T/P assembly screw size and location differs on the new LCD T/P display assembly (with LED backlight). Refer to table 2-1 for details.

For other failures (other than LCD T/P assembly E5061-60111)

If the defective part does not include LCD Touch Panel Assembly, proceed to replace the individual defective parts directly as usual. For instances, if the inverter 0950-4420 is found to be defective, replace the inverter alone will be sufficient. Similar applies to Touch Panel controller. Those parts are continuously supported and supplied until further notice. Refer to service guide for detailed instructions.

LCD Removal

Refer to E5061B Service Guide (Chapter 4- Replacement Procedure → LCD Assembly Replacement) for the step-by-step procedure.

Front Panel Interface Board/ Keypad Removal

Refer to E5061B Service Guide (Chapter 4- Replacement Procedure → A52 Front Panel Interface Boards/ Key Pad Replacement) for the detailed procedure.

Power Switch Assembly Replacement

Refer to E5061B Service Guide (Chapter 4 → Power Switch Assembly Replacement for detailed instructions.

Note: Kindly take note to keep the original parts as some of the assemblies are reusable and replacement is not necessary.

Table 2-1 Defective LCD T/P Assemblies - Support part strategy.

Table 2-1 depicts the support PN replacement strategy and their dependencies.

Identified Defective Part	Types	Current PN	Description	Qty.	New PN	Description	Qty.	Remarks
Inverter (0950-4420)	Assemblies, Modules	0950-4420	Inverter	1	0950-5396	Inverter	1	Direct replacement
Touch Panel Controller (0960-2972)	Assemblies, Modules	0960-2972/ 5012-8672 (Refer to E5061B-05 SN for details)	Touch Panel Controller	1	0960-2972/ 5012-8672 (Refer to E5061B-05 SN for details)	Touch Panel Controller	1	Direct Replacement
LCD Touch Panel Assembly (E5061-6011)	Assemblies, Modules	E5061-6011	LCD Touch Panel Assembly	1	E5061-60112	LCD Touch Panel Assembly (With LED backlight)	1	Replace set
		E5061-00212	Panel, Front Sub (All Opt)	1	E5061-00232	Panel, Front Sub (All Opt)	1	Replace set
		E5061-00611	Cover Shield, Front Assembly	1	E5061-00612	Cover Shield, Front Assembly	1	Replace set
		<i>E5061-00215 (Opt 3L5)</i>	Front Panel	1	<i>E5061-00215 (Opt 3L5)</i>	Front Panel	1	Common
		E5061-00211 (Opt 115 to 235)		E5061-00211 (Opt 115 to 235)				
		E5061-00211 (Opt 117 to 237)		E5061-00211 (Opt 117 to 237)				
		0950-4420	Inverter	1	0950-5396	Inverter	1	Replace set
		E5061-00602	Inverter Bracket/ Plate	1	E5071-01241	Inverter Bracket/ Plate	1	Replace set
		<i>E5061-87113 (Opt 3L5)</i>	Label (Frequency label)	1	<i>E5061-87113 (Opt 3L5)</i>	Label (Frequency label)	1	Common
		E5061-87111 (Opt 215, 117, 115, 217)		E5061-87111 (Opt 215, 117, 115, 217)				

		E5061-87112 (Opt 235, 137, 135, 237)			E5061-87112 (Opt 235, 137, 135, 237)			
		0960-2972/ 5012-8672 (Refer to E5061B-05 SN for details)	Touch Panel Controller	1	0960-2972/ 5012-8672 (Refer to E5061B-05 SN for details)	Touch Panel Controller	1	Common
		<i>E5061-66652 (Opt 3L5)</i>	Printed Circuit Board Assembly, Pb-free ENA-L Front Panel Interface, With Probe Power	1	<i>E5061-66652 (Opt 3L5)</i>	Printed Circuit Board Assembly, Pb-free ENA-L Front Panel Interface, With Probe Power	1	Common
		E5061-66662 (Opt 115 to 237)	Printed Circuit Board Assembly, Pb-free ENA-L Front Panel Interface, without Probe Power		E5061-66662 (Opt 115 to 237)	Printed Circuit Board Assembly, Pb-free ENA-L Front Panel Interface, without Probe Power		
	Cables	E5061-61633	LCD Display - Flat Cable assembly	1	E5070-61699	LCD Display - Flat Cable assembly	1	Replace set
		E5071-61608	Wire assembly, (Inverter to PCA Keyboard)	1	E5061-61654	Wire assembly, LED Driver (Inverter to PCA Keyboard)	1	Replace set
		(None)	(None) Original cable is pre-fitted with LCD T/P assembly	-	E5061-61653	Wire assembly, (Display backlight power)	1	New
		E5061-61651	Wire assembly, (From T/P controller to clip)	1	E5061-61651	Wire assembly, (From T/P controller to clip)	1	Common
		E5061-61627	Power Switch Cable Assembly	1	E5061-61627	Power Switch Cable Assembly	1	Common
	Gasket	0363-0170	RFI-Gasket Strip-Fingers	59	0363-0170	RFI-Gasket Strip-Fingers	59	Common
	Cable Tie	1400-0249	Cable tie (To tie the display cable assembly and Power Switch Cable)	1	1400-0249	Cable tie (To tie the display cable assembly and Power Switch Cable)	1	Common

Cable Clamp	(None)	Cable Clamp (Back of the LCD T/P Assembly)	-	1400-1334	Cable Clamp (Back of the LCD T/P Assembly)	4	New	
	1400-3415	Cable Clamp (Back of the front panel assembly)	1	1400-3415	Cable Clamp (Back of the front panel assembly)	1	Common	
	1400-1391	Cable clamp (back of the front panel assembly)	1	1400-1391	Cable clamp (back of the front panel assembly)	1	Common	
	1400-3337	Cable clamp (back of the front panel assembly)	1	1400-1391	Cable clamp (back of the front panel assembly)	1	Replace set	
	1400-3156	Cable clamp (Back of the front panel assembly)	2	1400-3156	Cable clamp (Back of the front panel assembly)	2	Common	
	Screws	(None)	Screw M4x0.7 - securing LCD Flat cable assembly	-	0515-5711	Screw M4x0.7 - securing LCD Flat cable assembly	2	New
		0515-1402	Screw M3x0.6 (Back of LCD T/P assembly)	4	0515-0430	Screw M3x0.5 (Back of LCD T/P assembly)	4	Replace set
		0515-0430	Screw M3x0.5 (Back of Front panel assembly cover shield)	6	0515-0430	Screw M3x0.5 (Back of Front panel assembly cover shield)	6	Common
		0515-1974	Screw M2.5.x0.45 (Bottom of inverter – hidden)	2	0515-0430	Screw M3.x0.5 (Bottom of inverter – hidden)	2	Replace set
		0515-1946	Screw M3x0.5 (Top of inverter)	2	0515-1946	Screw M3x0.5 (Top of inverter)	2	Common
		0515-0430	Screw M3x0.5 (On the power switch)	2	0515-0430	Screw M3x0.5 (On the power switch)	2	Common

		0515-0430	Screw M3x0.5 (Front Keyboard PCA)	13	0515-0430	Screw M3x0.5 (Front Keyboard PCA)	13	Common
		0515-1974	Screw M2.5x0.45 (To secure T/P controller board)	2	0515-1974	Screw M2.5x0.45 (To secure T/P controller board)	2	Common

1. Reuse and install the keyboard, keyboard PCA and power switch PCA on the new front panel sub as shown in figure 2-1.

Note: The front panel, panel sub and cover shield are required to be replaced due to dimension changes. Front panel frequency label has to be purchased separately according to unit frequency options.

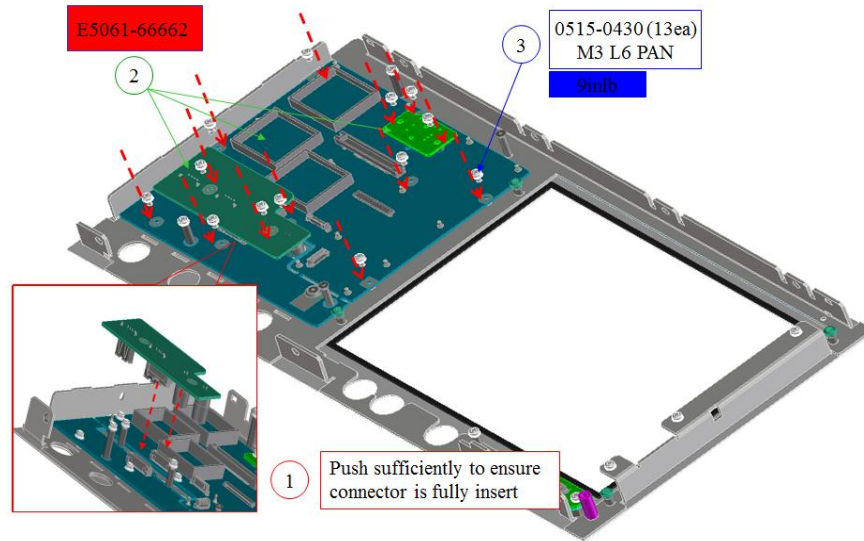


Figure 2-1

2. Install the gaskets as shown in Figure 2-2. Figure 2-3 illustrates the Front panel with the keyboard installed.

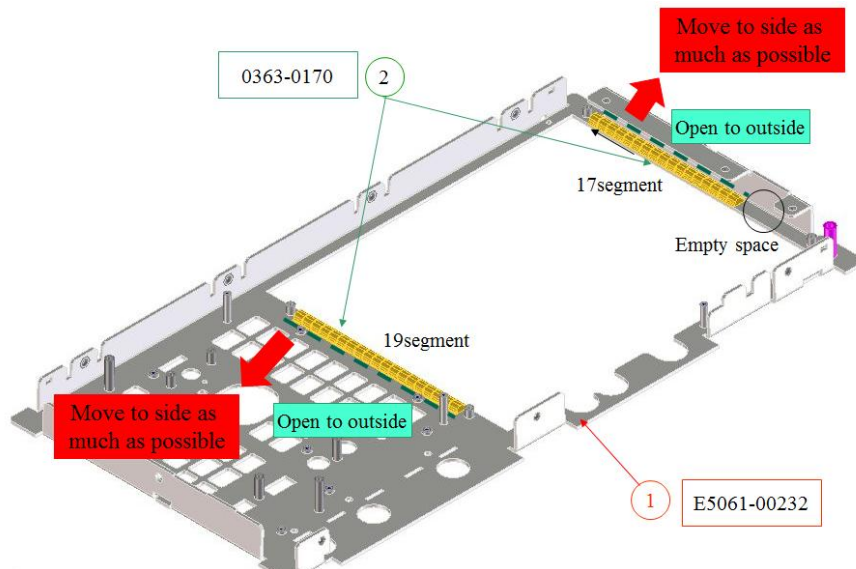


Figure 2-2

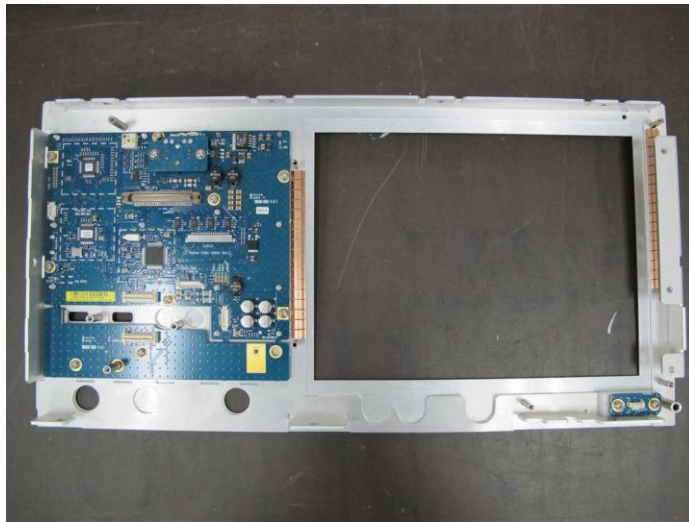


Figure 2-3

3. Install the inverter on the bracket before connect the cable assembly to both ends as shown in figure 2-4

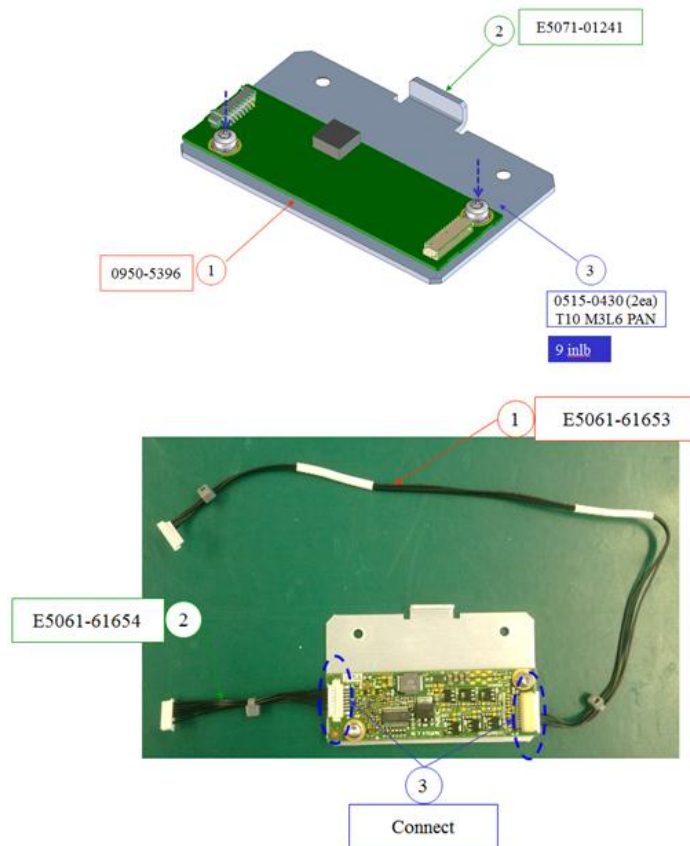


Figure 2-4

4. Install the inverter assembly onto the new LCD T/P display assembly (with LED backlight). Refer to figure 2-5 for details.

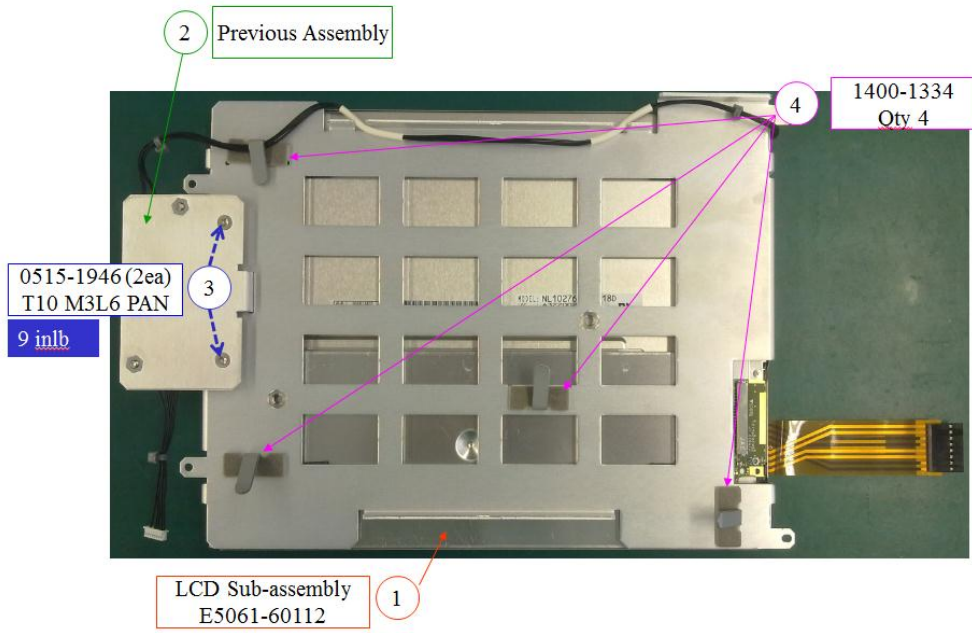


Figure 2-5

5. Connect and route the LCD display assembly cables accordingly.

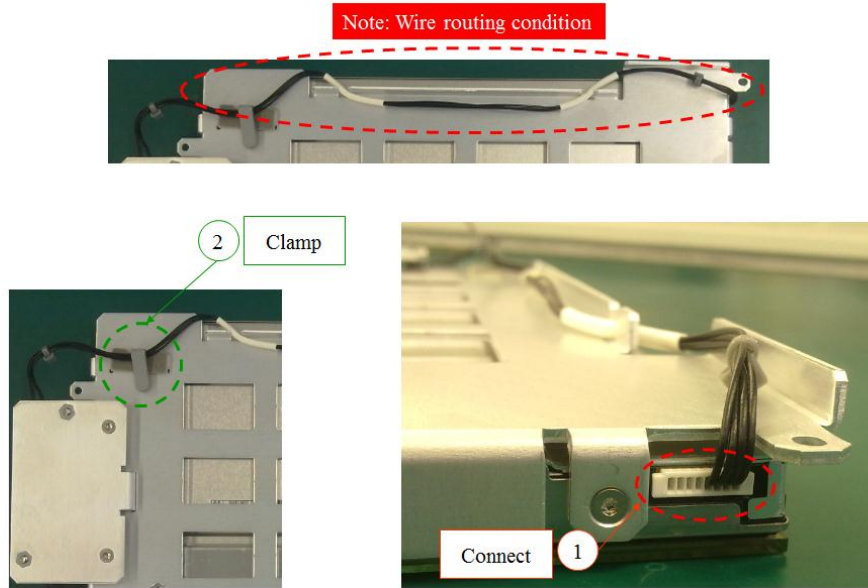


Figure 2-6

6. Install the LCD T/P Display Assembly onto the LCD Front Panel. Fasten the screws according to the following sequence. Connect all cable assemblies as shown in figure 2-7.

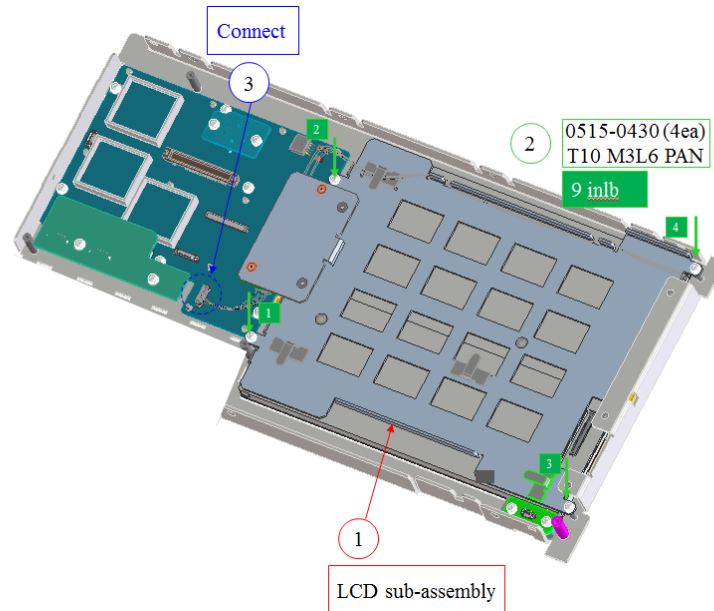


Figure 2-7

7. Connect, route and clamp the power switch cable assembly as shown in figure 2-8

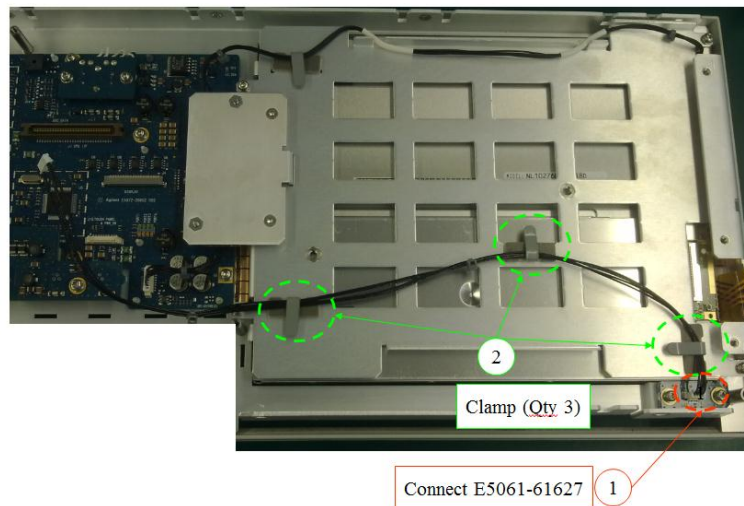


Figure 2-8

- 8. Connect the cable assemblies to the keyboard PCA as shown in figure 2-9.

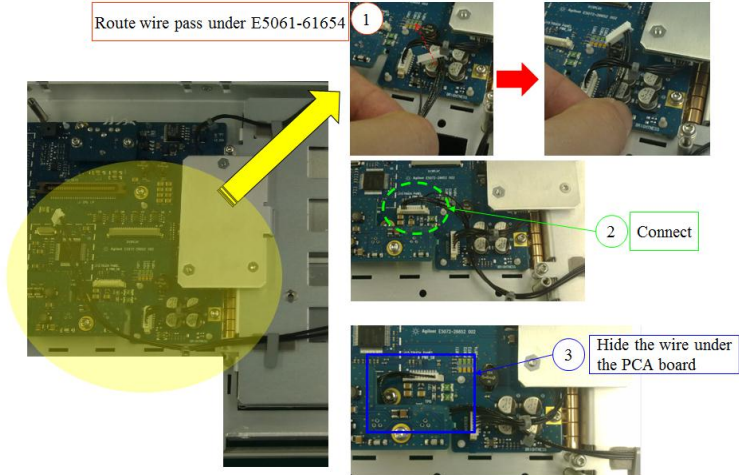


Figure 2-9

- 9. Connect the LCD T/P display cable assembly as shown. Fasten the screws in securing the cable. Tie the LCD T/P Display cable assembly to the Power switch cable assembly as shown in figure 2-10.

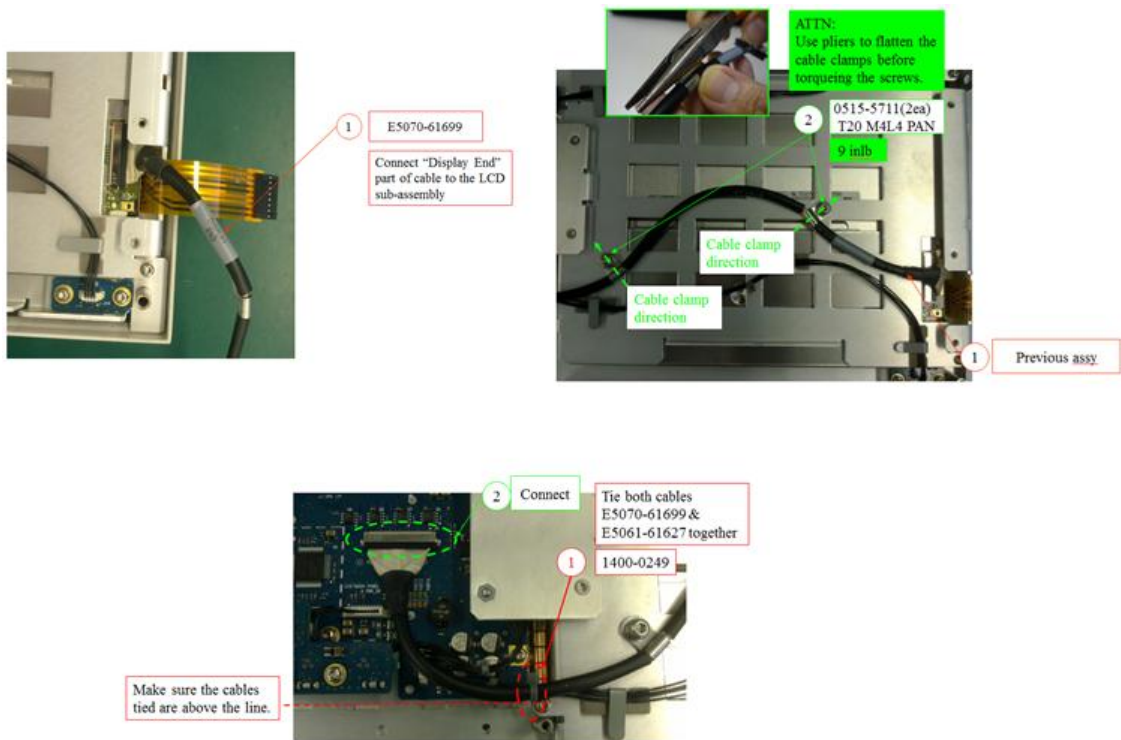


Figure 2-10

- 10. On the Front Panel back cover shield, install the cable clamp as shown in figure 2-11

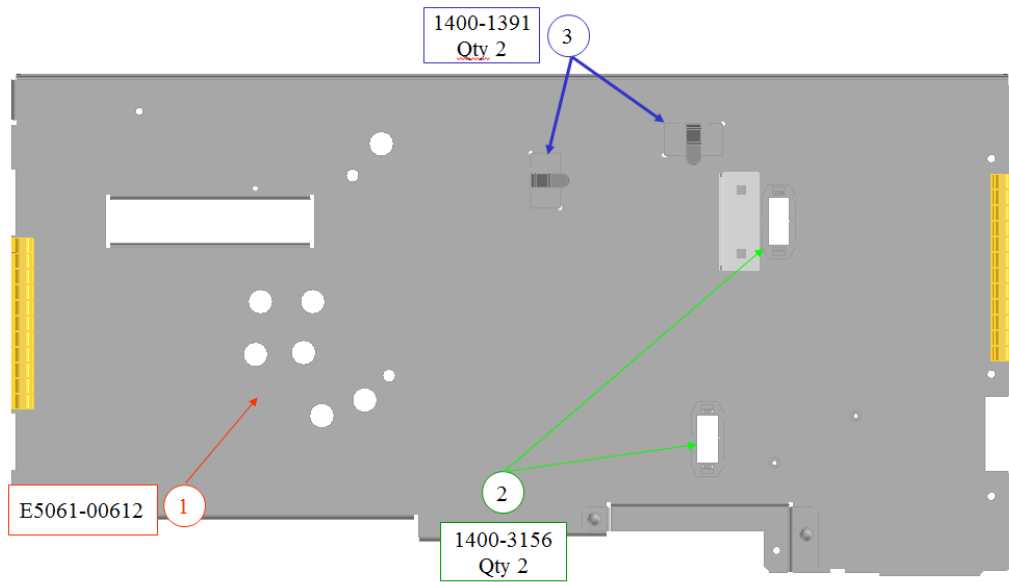


Figure 2-11

11. Install the cable clamps and Gasket (RFI fins) on the back cover as shown in figure 2-12.

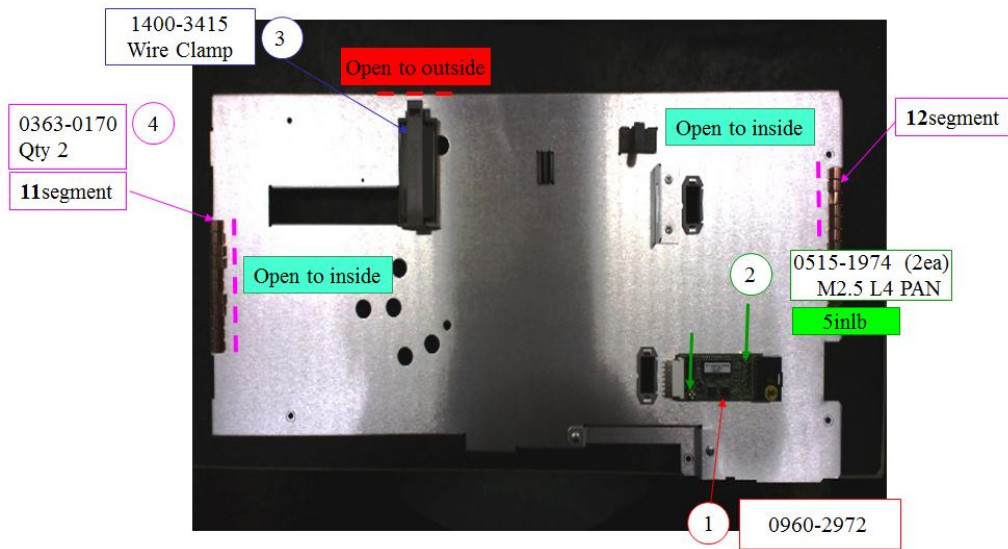


Figure 2-12

12. Install the LCD T/P controller and connect it with cables. Refer to figure 2-13



Figure 2-13

13. Shown would be the completed installation of the assemblies. Kindly ensure the connections of the cable assemblies are good and properly secured. Fasten the six screws in securing the shield (back cover) to the Front Panel Assembly. Refer to figure 2-14 for details.

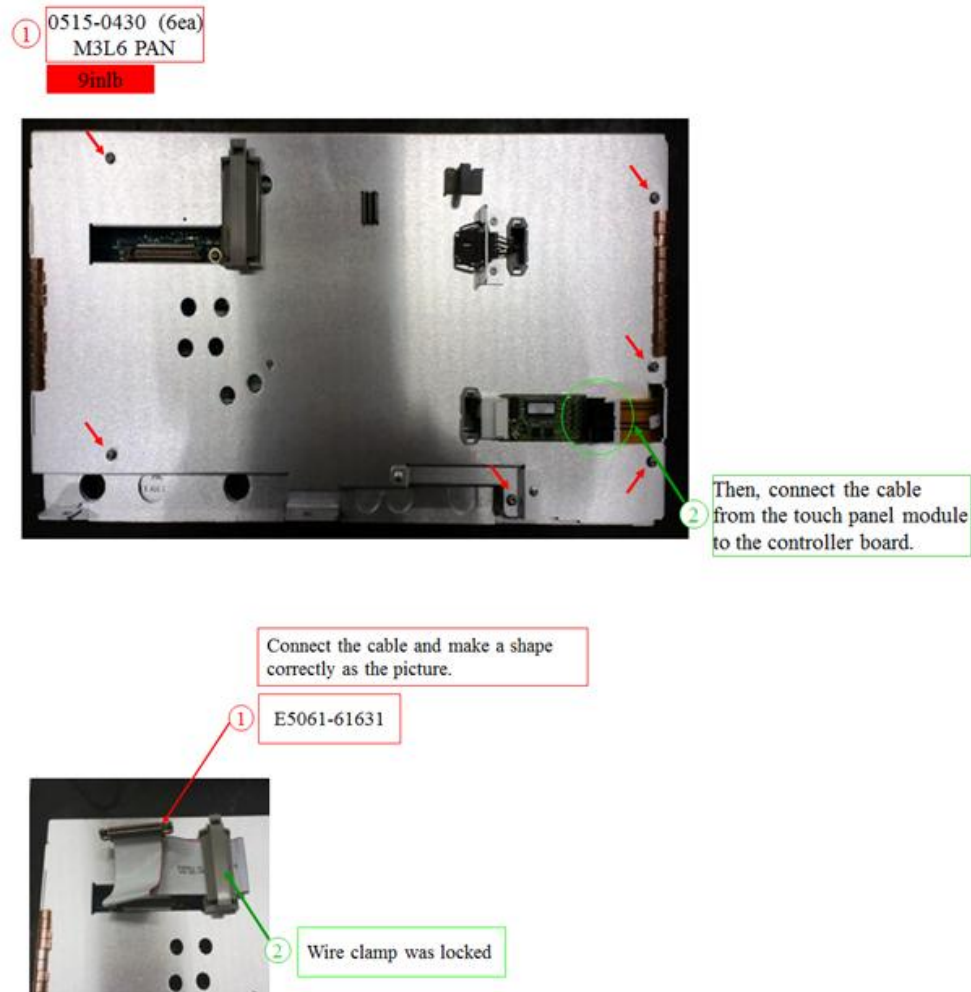


Figure 2-14

Post-repair requirements

Reinstall the front panel assembly by inverse procedure of removal.

Perform Touch Screen calibration and inspect on booting process. Execute the diagnostics test in verifying the functionality of Touch Panel and LCD display.

Refer to E5061B Service guide Chapter 4 Post-Repair Procedures for detailed instructions.

Revision History:

Revision Number	Date	Author	Reason For Change
1.0	Feb 14, 2014	LS	As published