

Service Bulletin				
Revision Date 07-April-2016	Problem Code ECT00	Warranty ☒ Normal warranty	Pages 7	Author Bill Hughes Scott Repplinger
Document No.:	EC160407		Rev.:	0
Subject:	Replacing the Engage 15 Inch Console LCD Panel			
Time Required:	☐ 15 min ☐ 30 min ☐ 45 min ☒ 1 hr+			
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DESCRIPTION

This service bulletin provides detailed instructions to replace the Engage LCD panel, due to obsolescence, with a LCD panel that is NOT a direct replacement for the original LCD.

Inspection of the console is required prior to ordering service parts, in order to determine the correct replacement components for the specific Engage console being worked on.

The following steps are detailed in this procedure:

- I. Identify correct replacement service part numbers required
- II. Replace Engage LCD
- III. Scrap original LCD device

AFFECTED MODELS

Product Model	Starting Serial Number	Ending Serial Number
15DT-XXXXXX-XX	All	All
15DN-XXXXXX-XX	All	All

REQUIRED PARTS KITS

The new parts required for this LCD replacement depends on the hardware configuration of the console that needs the LCD panel replacements. Follow the instructions in the “Procedure” section to identify the parts required.

REQUIRED TOOLS

Screwdrivers

Inverter Availability

The Engage console was built with one of two different backlight inverter boards.

- The 135E-00002-0006 backlight inverter board is obsolete and no longer available.
- The 135E-00002-0007 backlight inverter board is available in limited quantities.

If the inverter board is defective and the 135E-00002-0007 is no longer available, this service bulletin must be used to replace the LCD panel with part number 119E-00002-0057.

This LCD panel (119E-00002-0057) does not require the backlight inverter board, since it utilizes a LED backlight design.



Figure 1 - Inverter Board, p/n 135E-00002-0007

General Notes and Recommendations

- 1) Prior to beginning this rework, the console software should be updated to the latest version available (v1.58 as of the publishing of this bulletin).

To update software, review software instruction SI130729 (LF Tech Support).



SI CN 130729 R0
Software Update Inst

- 2) Inspection requires removing the rear cover of the console to identify the original hardware components installed in the console prior to ordering replacement service parts. The replacement service components differ according to the type of chassis and touch screen frame in the console being repaired.

Recommended: *LCD replacement should not be performed in the field. Some Console PCBAs must be transferred from the 1-hole chassis to the 2-hole chassis and will be damaged if exposed to even low levels of Electro-Static Discharge (ESD). This work should be performed in a static controlled environment, using anti-static mats (table and floor) along with a wrist strap.*

Note: *Care must be taken not to damage delicate wires or connectors when making this inspection and these repairs. It is easy to bend connector pins or pull wires from the connector housing, especially with the LVDS cable running between the SBC and LCD.*

I. IDENTIFY PARTS TO ORDER

Remove the Engage console from the base.

Remove the rear bezel. Identify A) chassis type and B) touch-screen frame type.

A. Identify the chassis type

Inspect the edge of the chassis where the touch screen frame attaches to the chassis. See **Figure 2**. There will be access slots allowing access to the mounting holes and screws on this edge of the chassis. There are 2 chassis types:

- i. Single mounting hole/slot: This fits the original 15" LCD panel only;
- ii. Two mounting holes/slots: This fits both the original and new 15" LCD panels.

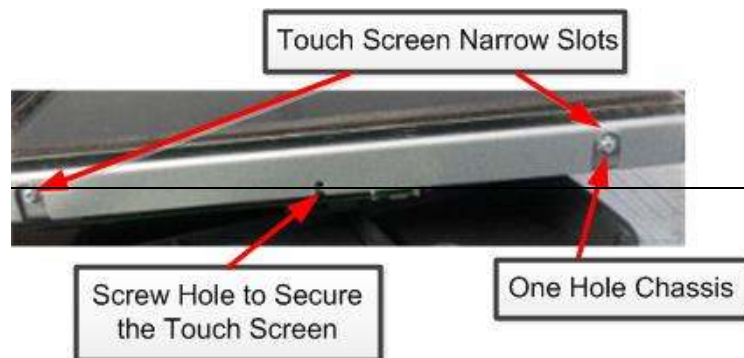


Figure 2 - Touch Screen Chassis

PROCEDURE (cont.)**B. Identify the original touch screen type**

Inspect the corners of the touch screen frame. See *Figure 3*. There will be a wide or a narrow slot in the edge of this frame.

- i. The original touch screen frame has a narrow slot (~3/8" wide), corresponding to a single mounting hole in each corner of the frame. If the touch screen frame has narrow slots, the frame must be separated from the chassis to determine which chassis is in the product.
- ii. Newer touch screen frames have wide slots to accommodate a chassis with two LCD mounting holes. Some consoles were manufactured with the new two-hole chassis, along with the original LCD and narrow touch screen frames.

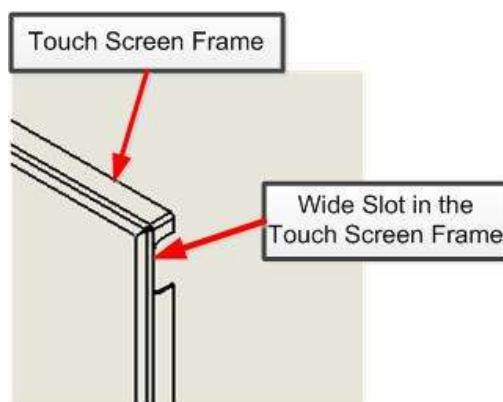


Figure 3- Touch Screen Frame

C. Parts to Order:

Once the chassis (one or two hole) and touch screen frame (narrow or wide slot) have been identified, order all the replacement service parts where x's indicate your console setup according to **Table 1**.

Table 1- Replacement Service Parts

Life Fitness Service Part No.	Description	Touch Screen Frame			
		Narrow Slot		Wide Slot	
	Chassis →	2-hole	1-hole	2-hole	1-hole
119E-00002-0057	15-INCH LCD, 1024X768, LED BKLT			X	
AK70-00105-0000	CABLE ASSY, SBCE TO LCD BACKLIGHT			X	
AK65-00061-0002	CABLE ASSEMBLY: SBCE TO 15" LCD; SHIELDED (LVDS cable)			X	
AK70-00038-0001	ASSY: BOLT-ON TOUCHSCREEN W/FLANGE & GASKET	X	X		
0K32-01231-0001	CHASSIS PANEL: DTV;PURCH		X		X

II. LCD Replacement Instructions:

- 1) Remove the screws securing the console and set aside for later use.
- 2) Open the console and remove the screws securing the metal chassis to the front of the plastic. Set aside for later use.
- 3) Remove the screws identified at “Screw Hole to Secure Touchscreen” in Figure 2. Disconnect the touch screen from J17. Place the touch screen, screen up, in a secure location where it will not become damaged. Disconnect the LVDS cable from J18 and the grounding ring next to it. Discard this cable.

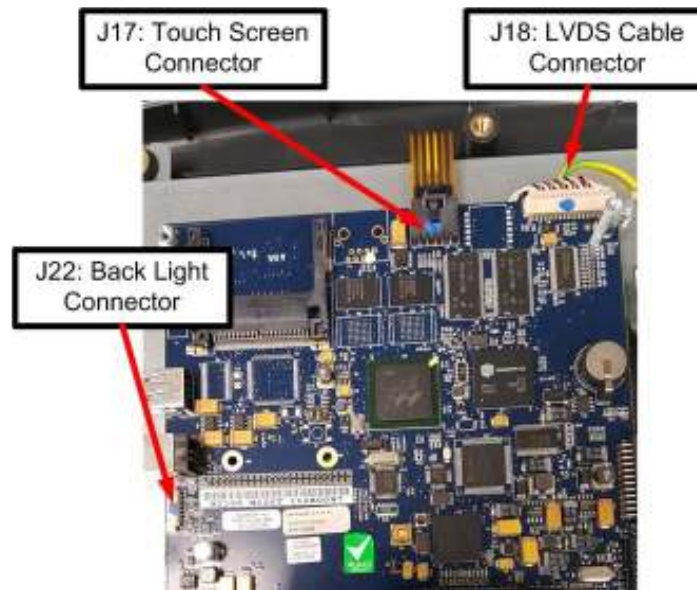


Figure 4- Key Connectors

- 4) If populated, remove the inverter board along with the related wires and discard it along with all cables attached to the inverter board. Reference Figure 1 for image of inverter board.
- 5) Remove the two screws per side securing the LCD screen in place. Set aside the screws for later use. Remove the existing LCD screen and discard.
- 6) If the existing console chassis is the two holes per slot chassis, skip to step 7. If the console chassis is the one hole per slot chassis, all boards and components will need to be transferred to the newer two holes per slot chassis. It is recommended that each board be removed from the original chassis first so that wiring can be maintained. Install all the boards together in the same location on the new chassis.

Recommended: Do not tighten these screws at this point.

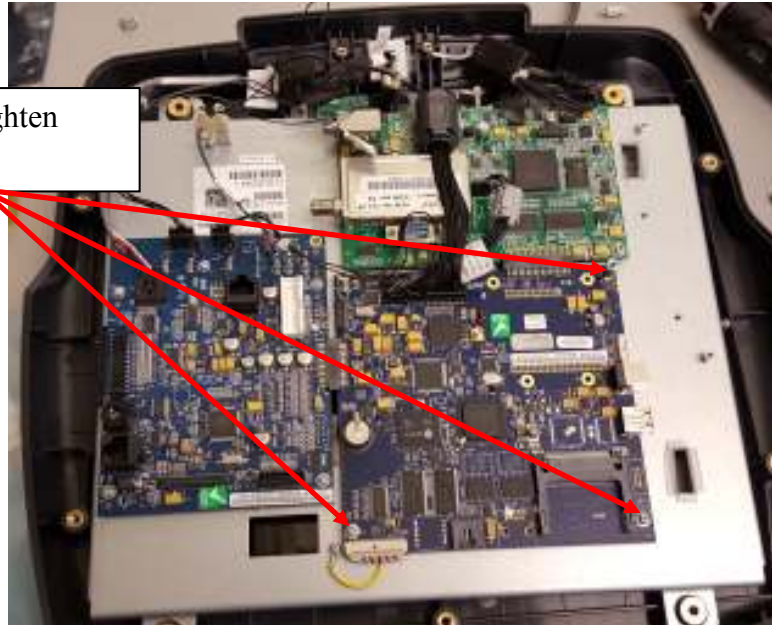


Figure 5- Proper location of boards.

- 7) Install the new LVDS Cable (AK65-00061-0002) into location J18 and adjacent grounding location (per Figure 4).
RECOMMENDED: Loosen the screws shown in Figure 5 to make it easier to route the LVDS cable underneath the board and through the correct chassis cutout location to the front of the chassis.
- 8) Connect the new backlight cable (AK70-00105-0000) to J22 (per Figure 4).
RECOMMENDED: Loosen the screws shown in Figure 5 to make it easier to route the backlight cable underneath the board and through the correct chassis cutout location to the front of the chassis.

- 9) Bring the new LVDS cable and backlight cable through to the front of the chassis. Connect the cables to the rear of the LCD screen as shown in Figure 6.

RECOMMENDED: Be careful when working with the wires and connectors it is very easy to bend connector pins or pull wires from the connector housing, especially with the LVDS cable running between the SBC and the LCD.

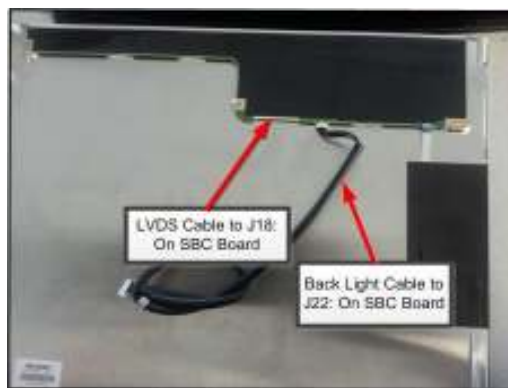


Figure 6 - LCD Backside View

- 10) Once the new LCD has been connected, seat it properly in the chassis. Use the screws removed in step 5 to secure the LCD in place.
- 11) Reinstall the touchscreen using the screws removed in step 4. Reconnect touchscreen cable to connector J17 (see figure 4).
- 12) Reattach the chassis to the front of the plastic bezel using the screws removed in step 2. Re-secure the plastic bezel pieces together using the screws removed in step 1.

III. Scrap Instructions:

After the rework process is complete, the following items should be scrapped following the normal procedure:

- Inverter board
- Previous LCD Screen
- Associated Cables
- One-hole per slot chassis (if applicable)