

TRM400-14 LPCA Cooling Fan Failure

Applies to

TRM400.14 Treadmills

Issue/Symptoms

The LPCA cooling fan may fail resulting in an error code 14 “Fan Fail (Lower PCA).” Error 14 will be logged if either the fan speed slows or completely stops rotating. There could be an associated unusual fan noise indicating a partial failure or no noise indicating that a complete failure has occurred. Error 14 will shut down the treadmill.

Resolution

After determining that the fan has failed, replace the fan.

Tools required

- 5/16” socket and ratchet with 8” extension
- #1 & #2 Philips screwdriver
- ESD strap and pad

Parts required

QTY	Part Number	Description
1	PPP000000013646101	TRM400 LPCA FAN

Procedure

Review entire procedure before starting.

- 1 Switch the power OFF and remove the hood.
- 2 Switch the power ON and determine the LPCA cooling fan operating condition. Make sure that there are no interface cables or debris blocking the fan rotation. Make sure that the fan power cable is properly connected (Fig.1):
 - a If the fan has failed, continue procedure.
 - b If the fan works, verify machine operation and return to service.
- 3 Switch the power OFF.
- 4 Remove the LPCA:
 - a Use the 5/16” socket with 8” extension to loosen the two LPCA mounting bracket bolts (do not remove).
 - b Then slide the LPCA bracket forward while lifting to remove from the two fasteners.
 - c Slightly tilt the LPCA board to the machine left side and disconnect the six LPCA interface cable connectors. Then disconnect (unplug) the drive motor power cable connector (Fig.1).
 - d Remove the LPCA and place on a flat ESD protected surface.

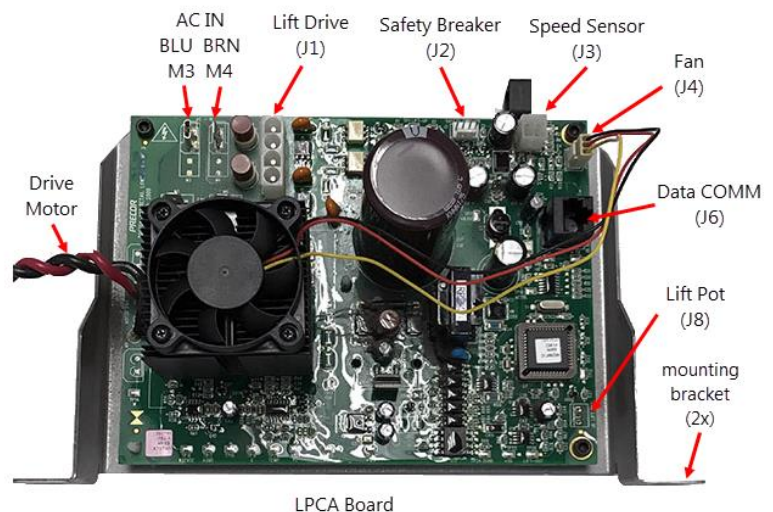


Fig. 1



Tip: It is highly recommended to remove the LPCA from the treadmill and do the fan replacement on a flat surface using an ESD strap. The small fan heat sink mounting clips can easily fall off and possibly be lost during the fan removal (Fig. 3).

5 Remove the Fan:

Wear an ESD wrist strap while doing the fan replacement procedure.

- a Disconnect the fan power cable (Fig. 2).
- b Remove the four #1 Phillips fan mounting screws (Fig. 2). Carefully hold the fan while removing the screws so that the fan heat sink mounting clips are not moved or fall off during removal.

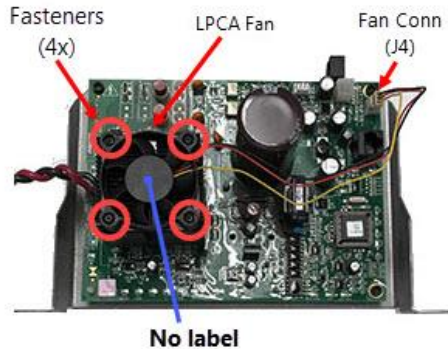


Fig. 2

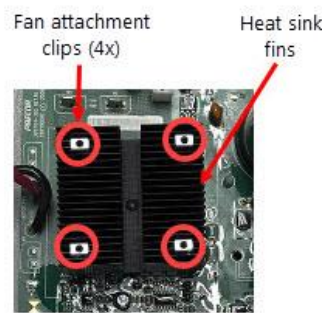


Fig. 3

6 Install the new fan:

- a Carefully clean the heat sink and remove any dirt or debris from between the heat sink fins. Be careful to not disturb the four fan mounting clips (4x) while cleaning (Fig. 3). They can easily fall off and be lost.
- b Carefully position the fan onto the heat sink mounting clips with the fan mfg. label facing down against the heat sink (Fig. 2). Adjust the clips so that the four fan bracket mounting holes are aligned with the clip bolt threads (Fig. 3).
- c Secure the fan using the four #1 Phillips screws (Fig. 2). Do not fully tighten until all four screws are installed. Fully tighten all four screws (do not overtighten screws).
- d Reconnect the fan power cable (Fig. 2).

7 Reinstall the LPCA:

- a Position the LPCA bracket on top of the two mounting bolts. Then slightly tilt the LPCA board to the machine left side and reconnect the six LPCA interface cable connectors. Then reconnect the drive motor power cable connector (Fig.1).
- b Slip the LPCA bracket onto the two 5/16" bolt heads and then slide towards the back to fit the bolts into the mounting slots.
- c Use the 5/16" socket with 8" extension to fully tighten the two LPCA mounting bracket bolts.

8 Switch the power ON, start a workout and verify fan operation. Make sure the fan is blowing air into and thru the heat sink fins (no fan mfg. label) (Fig. 2).



Caution: Make sure that the fan is mounted correctly so the air is blown into and thru the heat sink fins. Incorrect air flow will allow the components to overheat and damage the LPCA.

9 Clear the error log.

10 Switch the power OFF and reinstall the hood.

11 Switch the power ON, start a workout and verify that there are no new active error codes.

12 Verify operation and return to service.