

## How To Install the DSP Retrofit Kits

Tools required: Phillips screwdriver, wire cutter, cable ties  
 Estimated time required: one hour

### GK65-00002-0018 KIT CONTENTS

Contents of the 100-120 volt DSP Retrofit Kit are shown in Figure 1 (120V DSP RETROFIT BRKT ASSY), Figure 2 (DSP REPLACEMENT CBL-BAG ASSY), and Figure 3 (DSP REPLACEMENT HDWR-BAG ASSY).



Fig. 1: 120V DSP Retrofit Bracket Assembly

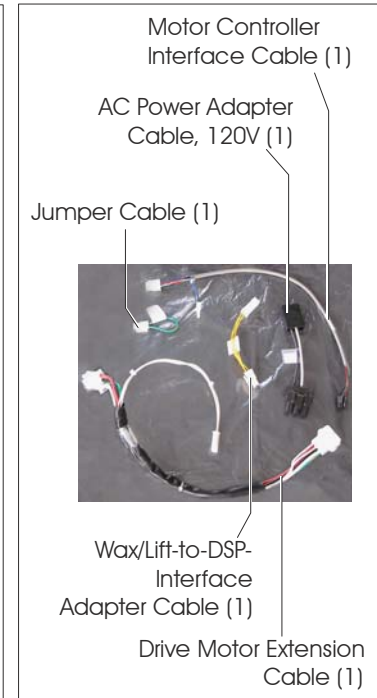


Fig. 2: Cable Bag

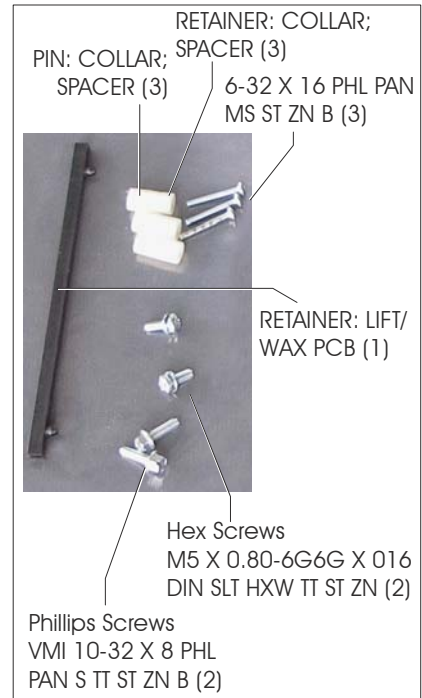


Fig. 3: Hardware Bag

**GK65-00002-0019 KIT CONTENTS**

Contents of the 200-240 volt DSP Retrofit Kit are shown in Figure 4 (230V DSP RETROFIT BRKT ASSY), Figure 5 (DSP REPLACEMENT CBL-BAG ASSY), and Figure 6 (DSP REPLACEMENT HDWR-BAG ASSY).

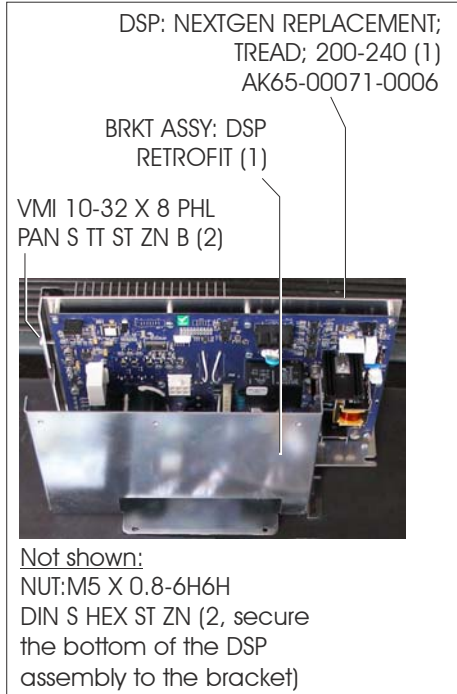


Fig. 4: 230V DSP Retrofit Bracket Assembly

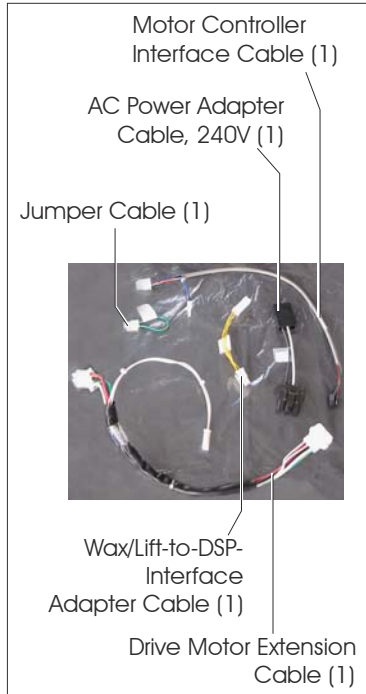


Fig. 5: Cable Bag

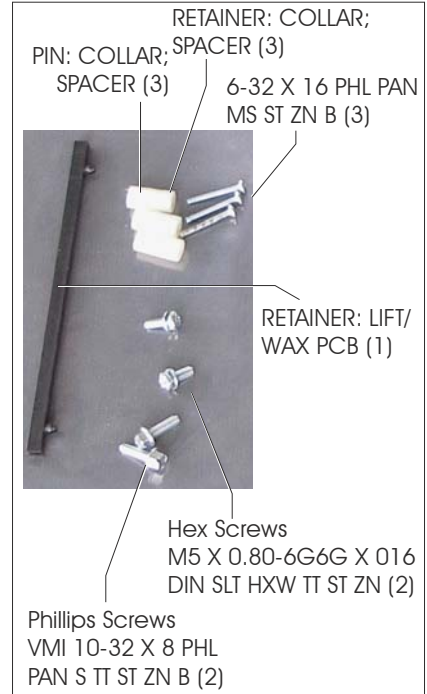


Fig. 6: Hardware Bag

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**TO DETERMINE MOTOR CONTROLLER TYPE**

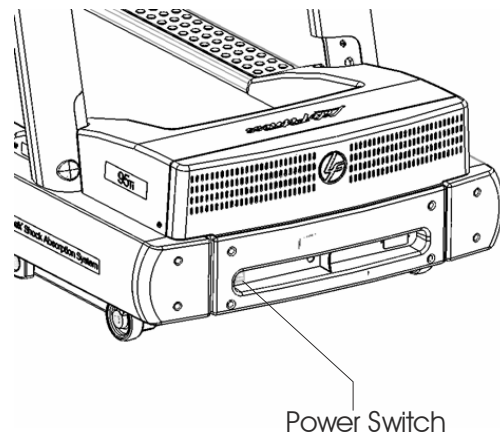
This document contains procedures for two types of motor controllers: boxed and non-boxed. To determine which procedure to follow, locate the treadmill's model number in this chart:

Serial No. Prefix	Treadmill Model No.	Motor Controller Type	
HTN	TR91-XXXX-35	boxed	
HTO	TR95-XXXX-35		
HTP	TR97-XXXX-03		
TTC	93T-XXXX-01		
TTI	95T-XXXX-01		
TTN	97T-XXXX-01		
TWZ	95TWEZ-XXXX-01	non-boxed	
TWW	97TWEZ-XXXX-01		
TTD	93T-XXXX-02		
WTB	93TW-XXXX-02		
TTJ	95T-XXXX-02		
TTS	95TS-0100-02		
WTC	95TW-0100-02		
TTO	97T-XXXX-02		
WTD	97TW-0100-02		
TTF	T9-XXXX-02		

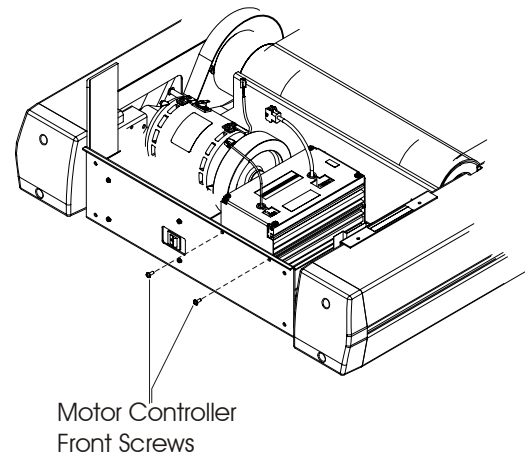
To remove boxed-type motor controllers, follow the procedure beginning below. To remove non-boxed-type motor controllers, follow the procedure beginning on page 6.

**TO REMOVE A BOXED-TYPE MOTOR CONTROLLER**

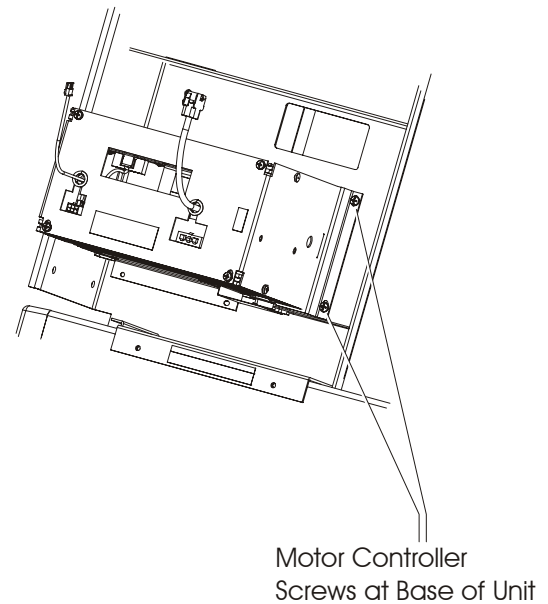
1. Turn the treadmill off at the power switch.
2. Unplug the unit from the wall outlet.
3. Remove the inside upright covers.
4. Remove the front cover.
5. Cut the three cable ties that secure the wiring.



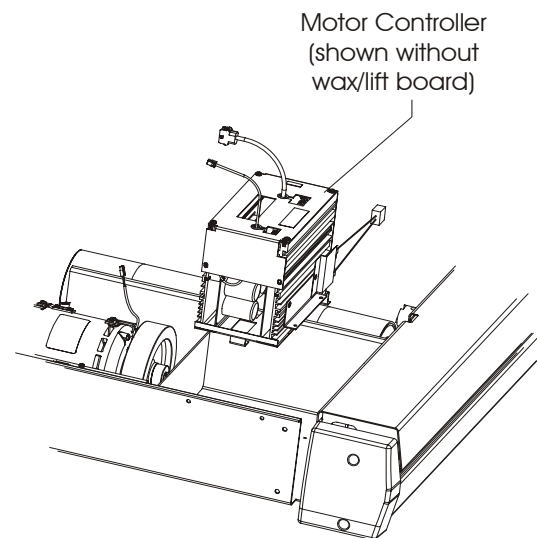
6. Remove the two motor controller mounting screws at the front of the unit.



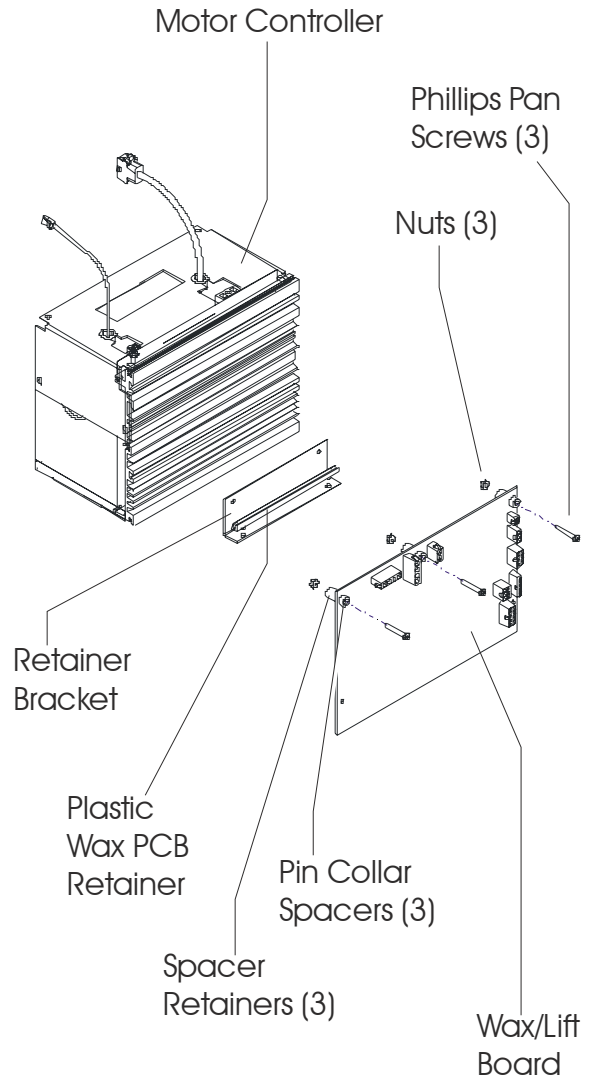
7. Remove the two motor controller mounting screws at the base of the unit.



8. Move the motor controller to allow access the wax/lift board connectors.
9. Disconnect connectors P1, P2, P3, and P5 at the top of the motor controller.
10. Disconnect connectors P1, P2, P4, P5, P8, and P9 on the wax/lift board.
11. Lift the motor controller and the attached wax/lift board out of the unit.

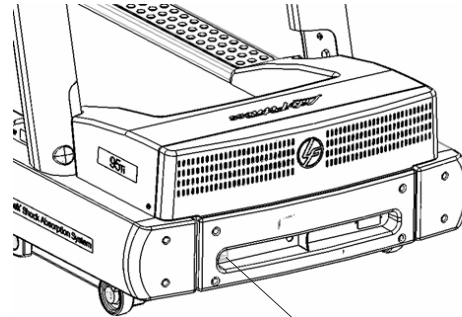


12. Remove the three mounting screws and spacers that secure the wax/lift board to the motor controller.
13. Lift the wax/lift board off the plastic wax/lift PCB retainer. Discard the motor controller. Save the wax/lift board for reinstallation.
14. Proceed to page 11.

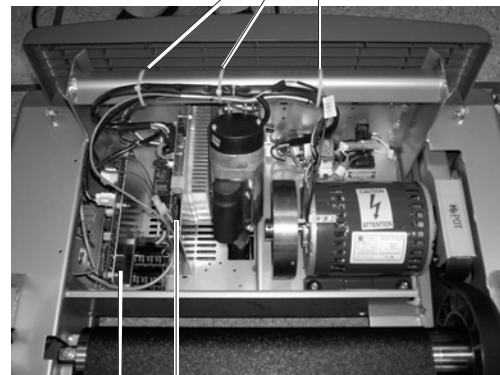


**TO REMOVE A NON-BOXED-TYPE MOTOR CONTROLLER**

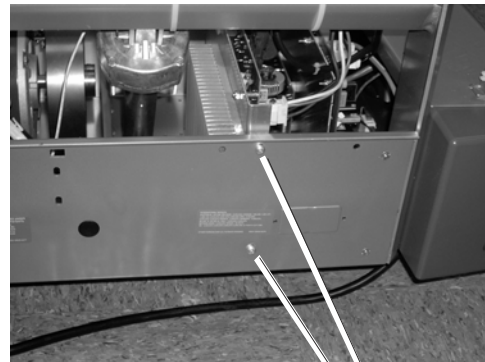
1. Turn the treadmill off at the power switch.
2. Unplug the unit from the wall outlet.
3. Remove the inside upright covers.
4. Remove the front cover.
5. Remove the motor cover.



6. Cut the three cable ties that secure the wiring.



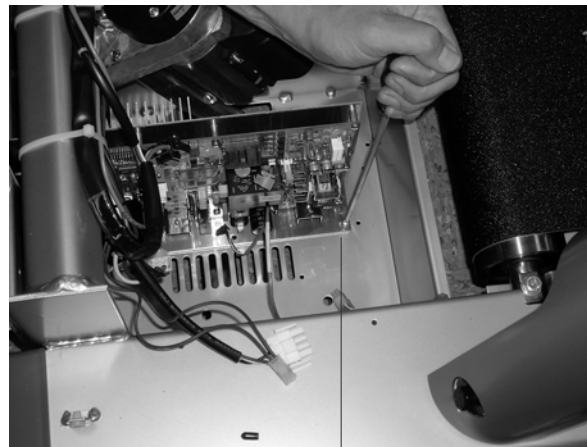
7. Remove the two front motor controller mounting screws.



8. Remove the two bottom motor controller mounting screws.



Bottom Motor Controller  
Mounting Screw (1)

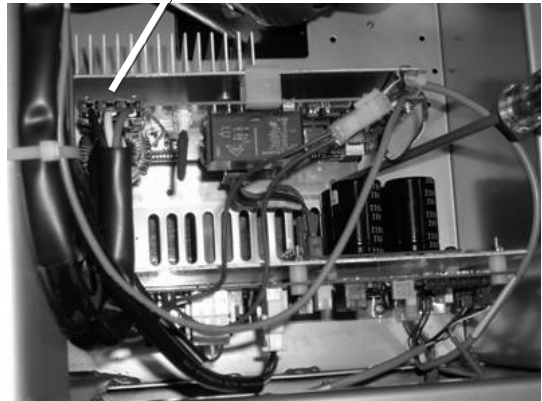


Bottom Motor Controller  
Mounting Screw (2)

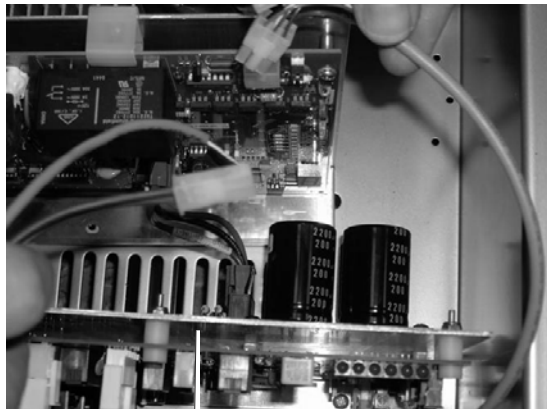
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9. Unplug the cables from the motor controller.

Motor Controller



10. Unplug the cables from the wax/lift board.



Wax/Lift Board

Motor Controller

11. Carefully remove the motor controller.



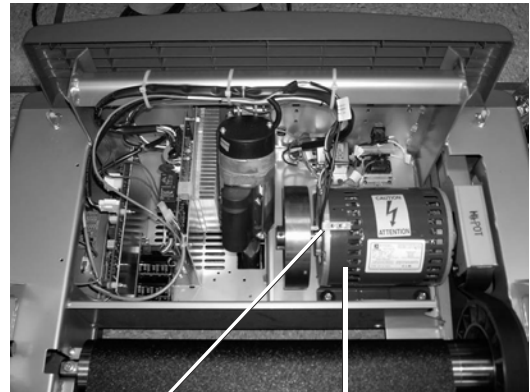


12. Carefully remove the wax/lift board.

Wax/Lift Board      Capacitor Board



13. Remove the speed sensor assembly from the drive motor.

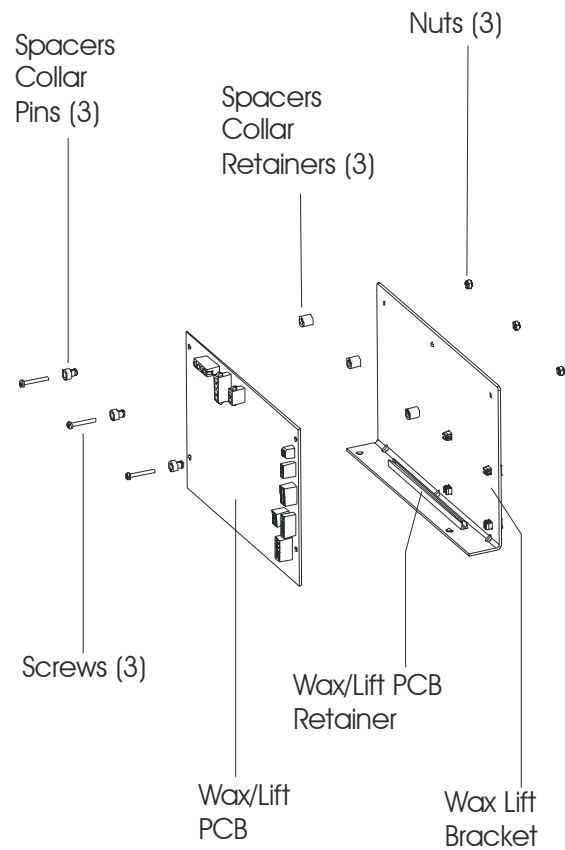


Speed Sensor      Drive Motor



Cable Tie      Speed Sensor Cable

14. Detach the wax/lift board from the bracket by removing the three screws. Save the wax/lift board for reinstallation. Discard the other pieces.

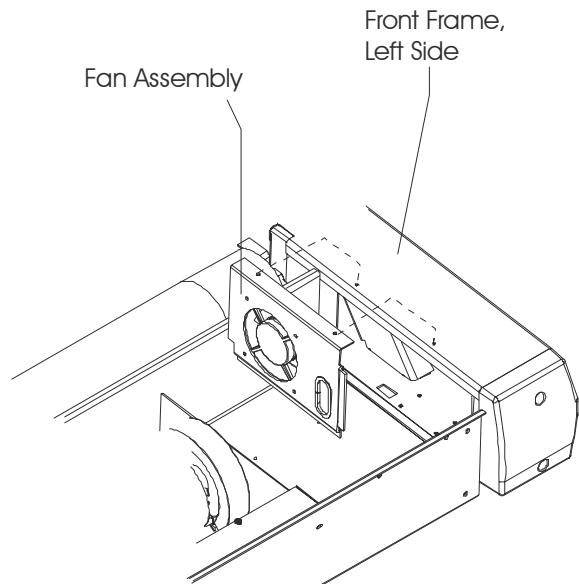


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## TO REMOVE THE FAN ASSEMBLY

The fan assembly must be removed from machines in which it is attached to the front of the frame. For other models, proceed to step 5.

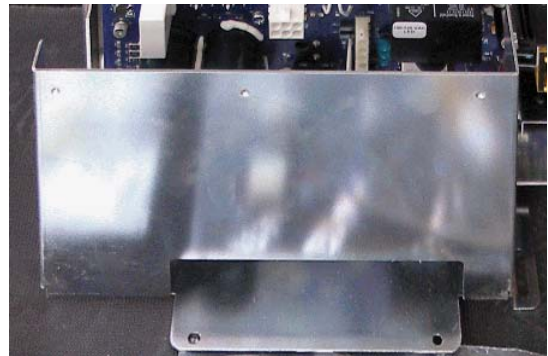
1. Remove the motor controller and wax/lift board. See page 3 (for boxed-type motor controllers) or page 6 (for non-boxed-type motor controllers).
2. Remove the two top fan screws from the front of the left side frame.
3. Lift the fan out just enough to disconnect the two wire connectors at the fan terminals.
4. Remove and discard the fan.



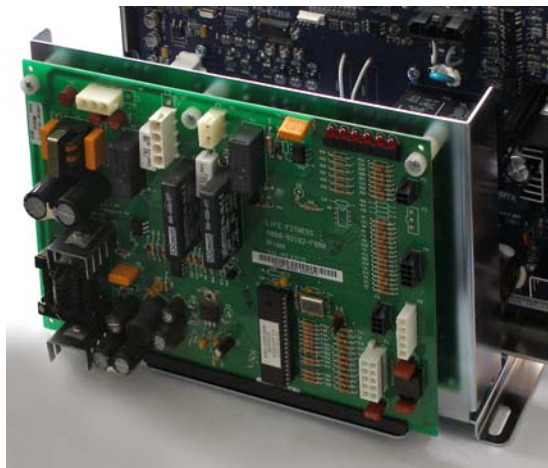
## TO ATTACH THE WAX/LIFT BOARD TO THE DSP BRACKET

5. Attach the wax/lift board to the DSP bracket. Use the hardware included with the DSP Retrofit kit.

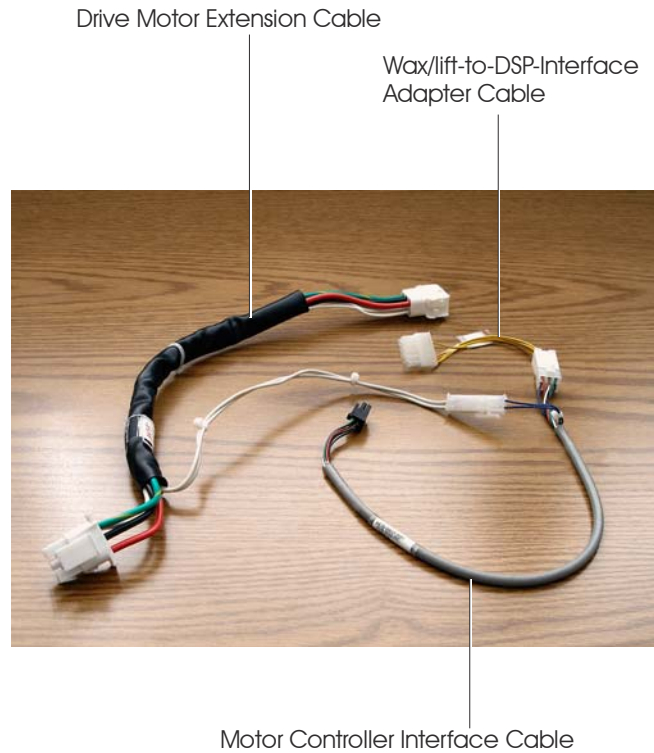
DSP bracket:



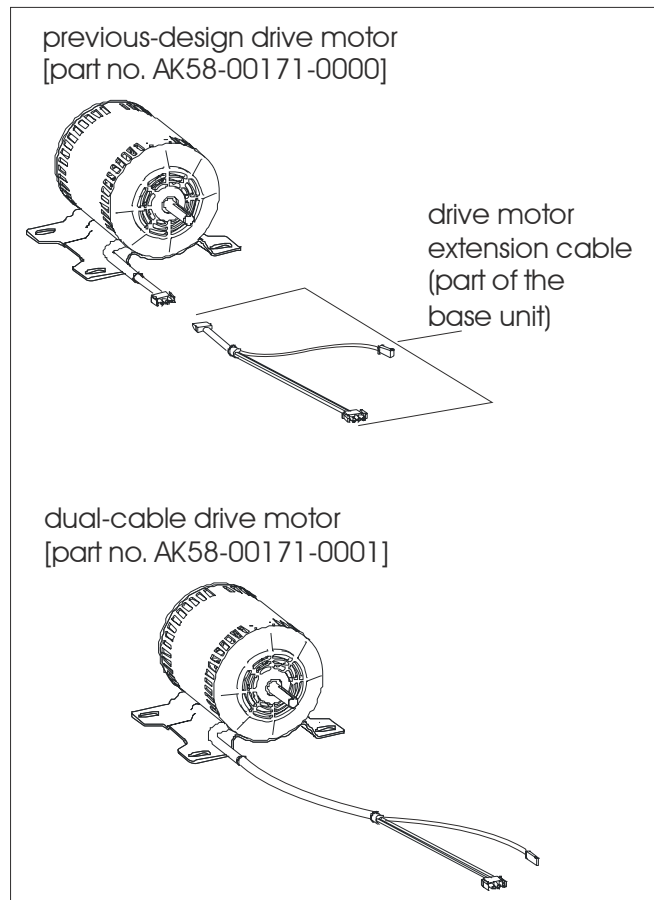
DSP bracket with wax/lift board attached:



6. Connect the, drive motor extension cable, wax/lift-to-DSP-interface adapter cable, and the motor controller interface cable as shown in the photograph.



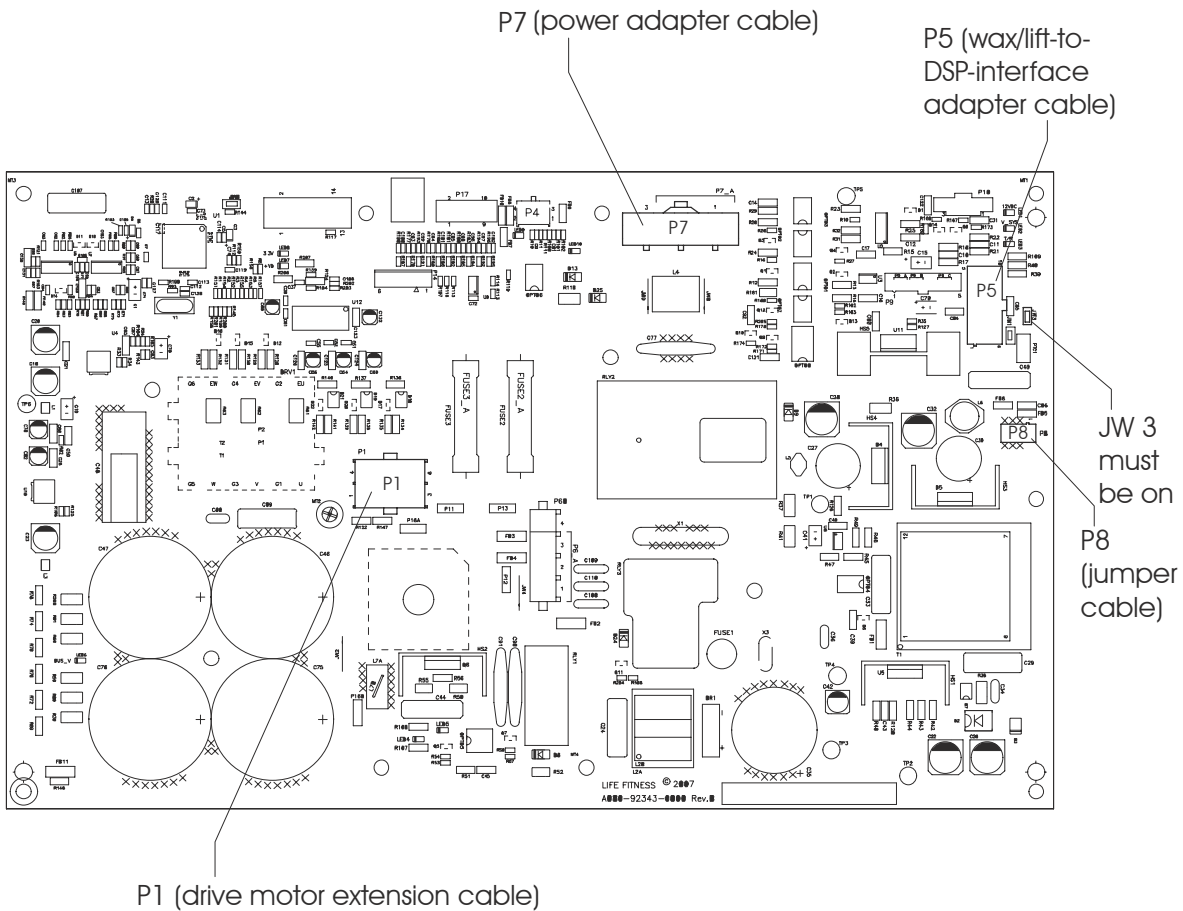
If the drive motor has an extension cable, connect it.



If the unit is a dual-cable drive motor, discard the extension cable.

## TO INSTALL THE NEW DSP MOTOR CONTROLLER

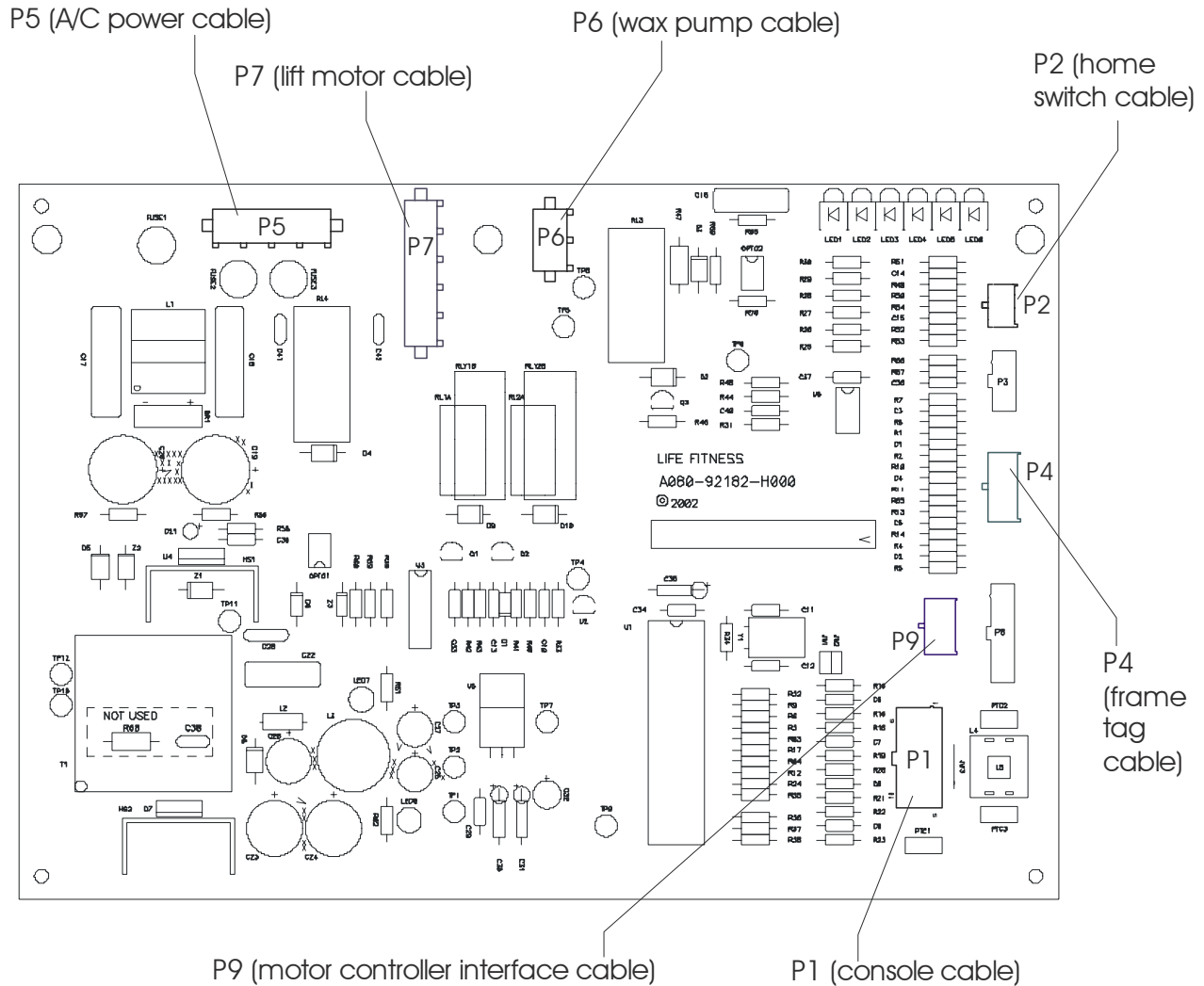
1. Reattach the cables to the DSP controller:
  - a. Plug the jumper cable into connector P8.
  - b. Plug the wax/lift-to-DSP-interface adapter cable into P5.
  - c. Plug the drive motor extension cable into P1.
  - d. Plug the AC power adapter cable into P7.



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## 2. Reattach the cables to the wax/lift board:

- a. Plug the console cable into connector P1.
- b. Plug the motor controller interface cable into P9.
- c. Plug the frame tag cable into P4.
- d. Plug the home switch cable into P2.
- e. Plug the wax pump cable into P6.
- f. Plug the lift motor cable into P7.
- g. Plug the A/C power cable into P5.



3. Attach the DSP bracket to the front frame with the two Phillips screws from the kit's hardware bag.



4. Attach the DSP bracket to the bottom frame with the kit's two hex screws.
5. Enter the treadmill's Diagnostics and log the repair.

