

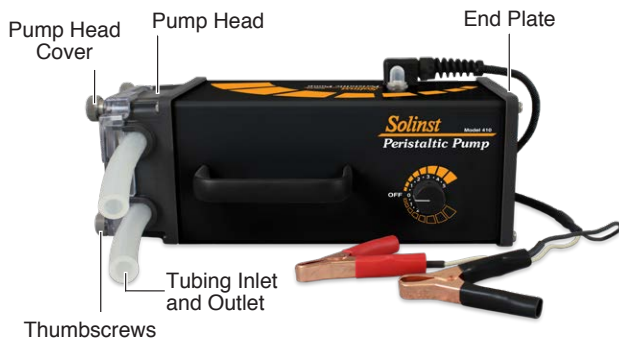
## Tools and Materials Needed

1. Replacement Motor Assembly (#114331)
2. 9/64" (3.60 mm) Allen Key
3. 11/32" (8.70 mm) Nut Driver
4. Phillips Screwdriver
5. 5/16" (8 mm) Hex Socket Driver



Replacement Motor Assembly (#114331)

## Instructions



Model 410 Mk4 Peristaltic Pump (#112981)

1. Disconnect the pump from the power supply and loosen the four thumbscrews on the pump head by hand. Remove the pump head cover.



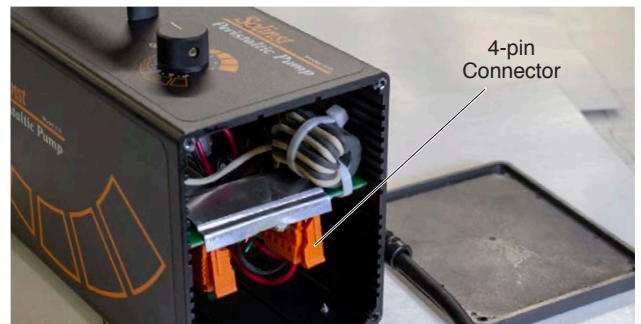
2. Manually rotate the head roller while pulling gently on the tubing to pull it from the pump head.



3. Use the 9/64" (3.60 mm) Allen key and 11/32" (8.70 mm) nut driver to unscrew and remove the socket screw, nut, and washer from the head roller. Remove the head roller from the motor shaft.



4. Use the socket driver to remove the four tapping screws from the end plate (opposite end from pump head).
5. Carefully slide the control board out of the pump housing.
6. Unplug the 4-pin connector (with red and black wires) from the control board.

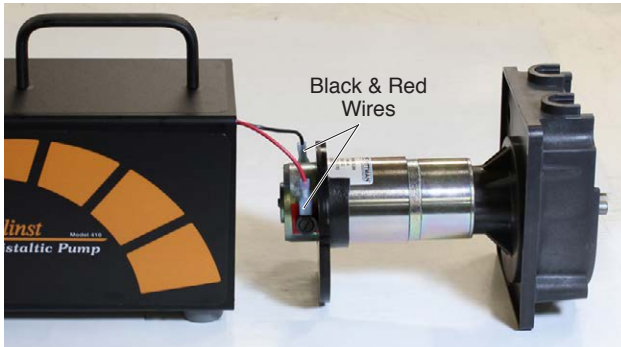


7. Use the socket driver to remove the four tapping screws from the pump head. Remove the pump head, with motor connected, from the pump housing.

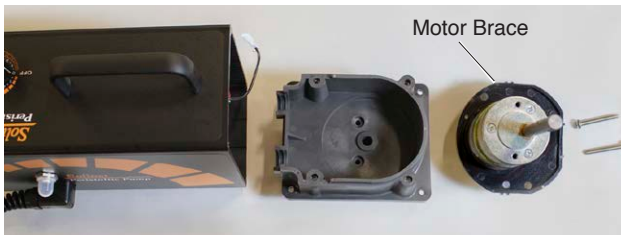


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8. Disconnect the black and red wires from the motor assembly.



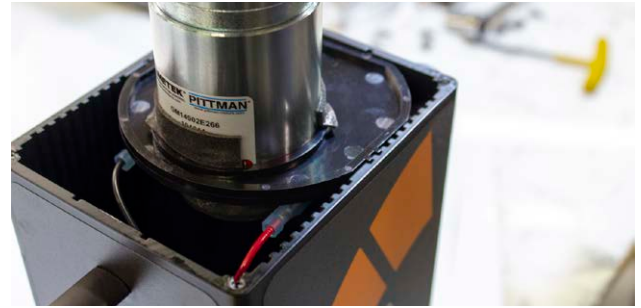
9. Unscrew the Phillips screws from the pump head and remove it from the motor assembly.



10. Remove the foam tape and slide the motor brace from the old motor.
11. Slide the motor brace onto the new motor until it seats against the two terminals. Secure in place using the two new pieces of foam tape.



12. Use the Phillips screws to connect the pump head to the new motor assembly.
13. Attach the black and red wires to the new motor assembly (black wire to the black negative terminal, and red wire to the red positive terminal on the motor assembly).
14. Align the tabs on the motor brace with the grooves in the pump housing and insert the new motor assembly into the pump housing.



15. Secure the pump head to the pump housing with the four tapping screws.
16. Plug the 4-pin connector back into the control board.
17. Slide the control board back into the pump housing using the slots in the sides of the housing.
18. Carefully push all wires into the housing and screw the end plate back on the pump housing.
19. Rotate the shaft of the motor so the screw hole in the shaft is vertically facing. Slide the head roller onto the motor shaft, centre it, and secure it using the screw, washer, and nut. Make sure the head roller turns freely and is not touching the pump head.
20. Position the tubing around the impeller in a "U" shape with equal lengths. Turn the impeller to the 6 and 12 o'clock position and push the right hand tubing into the tubing pathway, holding near the bottom. Rotate the impeller clockwise until tubing is in place. Push the left half of the tubing into place and rotate the impeller.
21. Position the pump head cover and screw it firmly in place by hand. Thumbscrews should be finger tight. Do not use a wrench or over-tighten.



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