



## AN EXCHANGE OF TECHNICAL INFORMATION

**Number:** TL002 - 2025

**Subject:** Dual Speed condenser motor limp home

**Released:** February 14, 2025

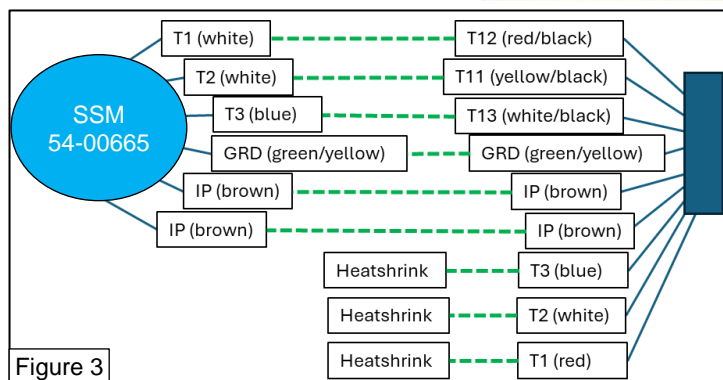
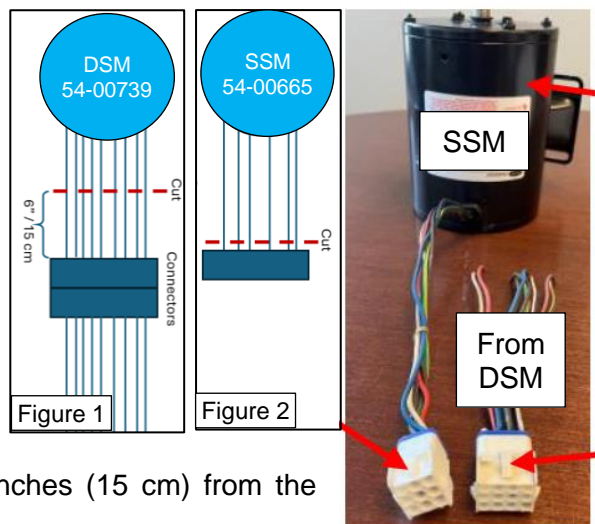
In the event of a condenser motor failure on a ML5 PrimeLINE EDGE (571-3XX, 571-5XX) or OptimaLINE (701-XXX) unit without a spare dual speed motor (DSM) (54-00739-XX) available, a single speed condenser motor (SSM) (54-00665-XX) can be used to complete the voyage.

To install the single speed condenser motor, follow the procedure below:

1. Turn the unit off, ensure circuit breakers CB1 and CB2 are in the OFF position, and disconnect the unit from power.

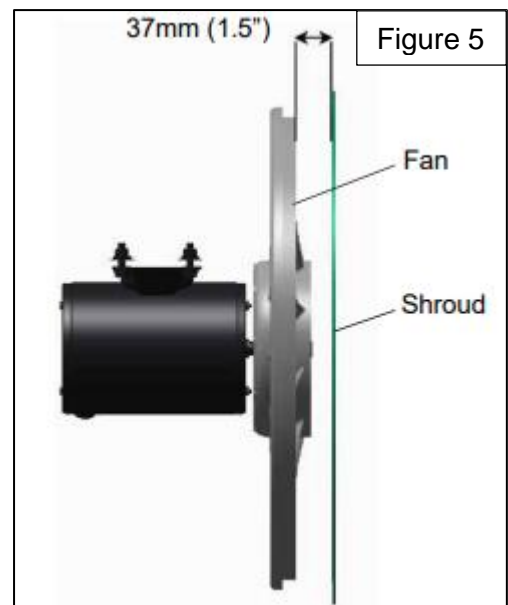
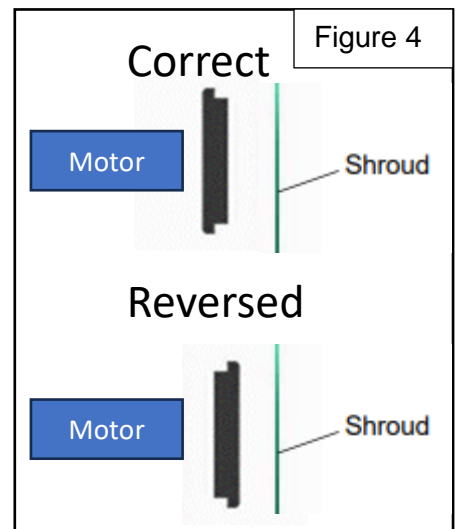
### Follow local lockout-tagout procedures in your area.

2. Remove the condenser fan grille, retaining the bolts and washers for reinstall.
3. Remove the condenser fan by loosening the two set screws.
4. Disconnect the condenser fan motor wiring and cut 6 inches (15 cm) from the terminal on the failed motor. See figure 1.
5. On the replacement single speed motor, cut and discard the plug from the single-speed condenser motor. See figure 2.
6. Using butt splices and heat shrink tubing, connect the wires from the single-speed motor with the wires from the plug removed from the two-speed condenser motor as seen in figure 3. Cap the extra plug wires, T1(red), T2(white) and T3(blue), using closed-end heat shrink tubing.
7. On the failed motor, Note the number of shims on each side of the motor. The same configuration is required to refit the new motor.



**Take necessary steps (place plywood over coil or use sling on motor) to prevent motor from falling into condenser coil.**

8. Remove the fan motor and mounting hardware. Save the mounting hardware for reinstallation and discard the failed motor.
9. Loosely mount the new motor using new lock nuts and ½" sockets.
10. Connect the fan motor wiring to the new fan motor.
11. Replace the shims in the same configuration as they were removed.
12. Tighten the fan motor mounting bolts to 12 Ft-Lbs (~16 Nm) to properly secure the motor.
13. Slide the condenser fan onto the motor shaft reversed but do not secure. See figure 4 for reversed direction
14. Rotate the fan to make sure the fan blades do not contact the shroud.
  - a. If the fan motor is misaligned vertically, add or remove shims to align.
  - b. If the fan motor is not properly centered, loosen the mounting bolts, and adjust the motor position on the bracket, and then secure the motor.
15. Remove and replace the condenser fan on the shaft facing the correct direction, apply Never-Seez regular grade between the motor shaft and fan hub. Adjust the fan to the correct position, 37mm (1.5") from the fan shroud, see Figure 5.
16. Use Loctite "H" on the fan set screws and tighten with a 5/32" hex bit to 130 in-lbs (14.7 Nm).
17. Refit the condenser fan grille, ensuring the grille is properly centered around condenser fan.
18. In the control box, locate high speed condenser fan contactor (CF) and remove the low voltage wire labeled CC5 from the terminal CF21. See figure 6 and 7.
19. On the same CF contactor, connect the CC5 wire to the low voltage terminal CFA1. CFA1 should only have wires CC4 and CC5 connected after installation. See figure 8 for the updated schematic label
20. Reconnect the unit to power, turn on circuit breakers, and turn on the unit. Ensure the fan is spinning the correct orientation.



**Tag the unit on the outside of the control box for awareness.**

**Replace the fan motor with a dual speed motor and undo rewiring in step 19 at the earliest convenience.**

