



UltraCheck-EZ[®] Diagnostic Tool

NOTICE

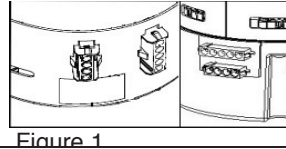
Only trained and qualified professionals familiar with PerfectSpeed[®] motors should service the motor and control unit.



The UltraCheck-EZ[®] diagnostic tool allows service professionals to verify the proper operation of Nidec PerfectSpeed[®] motors without removal from the blower housing.

1. Disconnect or turn off AC power to the furnace, air handler, and/or other equipment being serviced.

2. Disconnect the four wire communication cable from the control unit communication connector [Figure 1].



3. Connect the four wire connector of the UltraCheck-EZ[®] diagnostic tool [Figure 2] to the control unit communication connector



4. Attach one of the alligator clips of the UltraCheck-EZ[®] diagnostic tool [Figure 3] to a proper ground source.



NOTICE

There is no polarity on the alligator clips.

The UltraCheck-EZ[®] diagnostic tool is equipped with a nonreplaceable fuse. **DO NOT** connect the UltraCheck-EZ[®] diagnostic tool to a power supply over 24VAC. Applying more than 24VAC will make the UltraCheck-EZ[®] diagnostic tool inoperable.

5. Attach the other alligator clip [Figure 4] to a proper 24VAC source.



6. Restore power to the furnace, air handler, and/or other equipment being serviced.

NOTICE

The power button [Figure 5] on the UltraCheck-EZ[®] diagnostic tool sends a signal to the PerfectSpeed[®] motor to rotate when pressed. There may be a few second delay between the time the button is pushed and the motor begins to rotate. If the power button [Figure 5] doesn't illuminate when pressed, the UltraCheck-EZ[®] diagnostic tool is not connected to a 24VAC supply or is inoperable.



Figure 5

The green LED [Figure 6] indicates that the PerfectSpeed[®] motor is communicating with the UltraCheck-EZ[®] diagnostic tool. If the green LED [Figure 6] doesn't blink, the control unit should be replaced.



Figure 6



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7. Use the scenarios below to determine needed action. Complete steps 8-11 before proceeding to the next check. Press the power button [Figure 5] on the UltraCheck-EZ[®] diagnostic tool and wait few seconds for the blower to spin.

	Comments	Motor Blower	Green LED	Power Button
	If button does not illuminate when power button is depressed, verify 24VAC is available at alligator clips. If 24VAC is verified, the UltraCheck-EZ [®] diagnostic tool is inoperable.	Not Rotating	Not Lit	Not Lit
	Motor and control unit are functioning properly.	Rotating	Blinking	Lit
	Control unit should be replaced.	Rotating	Not Lit	Lit
	Further investigation required. Refer to PerfectSpeed [®] Motor Troubleshooting Manual to verify motor operation.	Not Rotating	Blinking	Lit
	Control unit should be replaced, refer to PerfectSpeed [®] Motor Troubleshooting Manual to verify the motor is still operational.	Not Rotating	Not Lit	Lit

8. Press the power button [Figure 5] again to stop the blower and turn off the UltraCheck-EZ[®] diagnostic tool.

9. Disconnect or turn off AC power to the furnace, air handler, and/or other equipment being serviced.

10. Remove both alligator clips [Figure 7] from the 24VAC and ground connections.



Figure 7

11. Reconnect the four wire communication cable to the control unit communication connector [Figure 8].

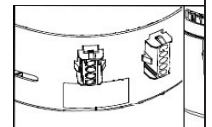


Figure 8

12. Restore power to the furnace, air handler or system being serviced.