



Ducted Systems Technical Services Service Letter

Letter: **YSR-002-24**

Date: August 14th, 2024

To: Ducted Systems (Factory Direct) S1 HVAC Branch Service, Sales, Warranty Managers
Ducted Systems (UPG/Applied) Distribution Service, Sales, Warranty Managers

Subject: **Outdoor ECM fan motor failures – Wolong brand**

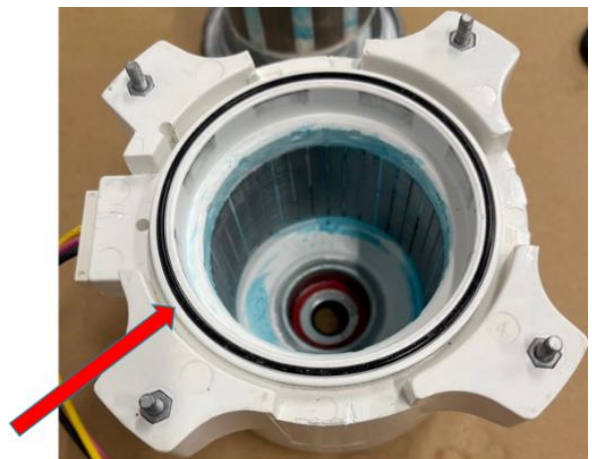
Product: AC19B, AL19B, YXT, CC7B, TC7B, RAC17, YCG, TCG, CC17B, TC17B, YFK, TCF2B, RAC15, YC2F, HC19B, HL19B, YZT, THF2B, RHP15, YH2F, TH4B, RHP14L, YHE, THE, CH6B, TH6B, RHP16L, YHG,

Effective: **August 14th, 2024**

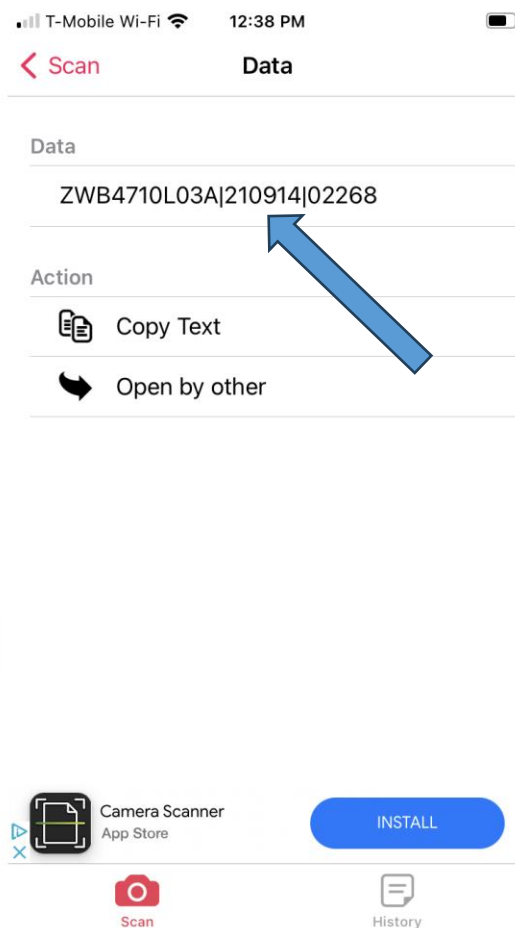
Expires: **August 14th, 2025**

Due to a higher-than-normal number of failures, an alternate vendor and motor model was selected and tested to replace the Regal 142R ECM outdoor fan motor. The alternate vendor is Wolong and EM42 series motor. This motor was implemented in late 2020 to all residential products that were using the Regal 142R ECM outdoor fan motor. Details of this change were communicated in service letter YS-008-20 which covered replacement of Regal 142R motors. As failure rates were monitored and warranty part returns were analyzed at the CWE (Center of Warranty Excellence) it was observed that some EM42 motors were failing due to corrosion of internal parts. Although a protective coating (rust inhibitor) was already part of the normal motor manufacturing process, some rust and bearing failure was noted.

There was a continuous improvement effort implemented into Wolong ECM motor production on September 13th, 2022. The improvement is an O-ring seal between the end cap and motor case. The photo to the right shows the O-ring inside the motor case. The improvement was announced on May 9th, 2023, in service letter ST-013-23. The service motor part number is S1-02440880000, and part number did not change when the O-ring improvement was made. Replacement motors with the O-ring improvement arrived at Source 1 on 11/09/2022 and material shipped after that date contain the O-ring improvement. The factory part number of the motor is 5900093 and, just like the service part, the part number did not change when the O-ring improvement was made. Due to this fact, we cannot provide a serial number range of equipment containing motors with the O-ring seal. The only way to identify this is by motor date code.



Each motor contains a data label containing the brand, part number, voltage, HP, motor wiring diagram, and a QR code. To find the date that the motor was manufactured, a mobile device can be used to scan (read) the data from the QR code. An example is shown below:



The data between the spacers contains the date code in format of YEAR / MONTH / DAY. For example, the number shown above |210914| indicates the motor was built September 14th, 2021.

For equipment built with a Wolong ECM outdoor fan motor or equipment that has been repaired using a Wolong ECM outdoor fan motor, if an outdoor fan motor not operating is reported, the service technician needs to test the components (ECM motor, controller, etc.) per STR-005-24 and determine whether the motor or controller has failed.

This service letter is intended for use ONLY when multiple fan motor failures have occurred meaning, a service part was already installed, and the service part later failed. See below information regarding service part(s) that may be listed in an outdoor unit's warranty history (highlighted in blue) and replacement part required (highlighted in green) AFTER testing has been completed per STR-005-24.

S1-32440880001 MTR,COND,W/ CNTRL,1/3 HP,875RPM,208/230V

Or

S1-02440880000 MTR,COND,NO CONTROLLER,1/3 HP,208/230V

Replace with:

S1-02440880000 MTR,COND,NO CONTROLLER,1/3 HP,208/230V

Or

S1-02442225000 CONTROLLER,COND,1/3 HP,875RPM,208/230V

S1-32440880002 MTR,COND,W/ CNTRL,1/3 HP,682RPM,208/230V

Or

S1-02440880000 MTR,COND,NO CONTROLLER,1/3 HP,208/230V

Replace with:

S1-02440880000 MTR,COND,NO CONTROLLER,1/3 HP,208/230V

Or

S1-02442223000 CONTROLLER,COND,1/3 HP,682RPM,208/230V

S1-32440880003 MTR,COND,W/ CNTRL,1/3 HP,917RPM,208/230V

Or

S1-02440880000 MTR,COND,NO CONTROLLER,1/3 HP,208/230V

Replace with:

S1-02440880000 MTR,COND,NO CONTROLLER,1/3 HP,208/230V

Or

S1-02442226000 CONTROLLER,COND,1/3 HP,917RPM,208/230V

S1-32440880004 MTR,COND,W/ CNTRL,1/3 HP,834RPM,208/230V

Or

S1-02440880000 MTR,COND,NO CONTROLLER,1/3 HP,208/230V

Replace with:

S1-02440880000 MTR,COND,NO CONTROLLER,1/3 HP,208/230V

Or

S1-02442224000 CONTROLLER,COND,1/3 HP,834RPM,208/230V

S1-32440880005 MTR,COND,W/ CNTRL,1/3 HP,PWM,208/230V

Or

S1-02440880000 MTR,COND,NO CONTROLLER,1/3 HP,208/230V

Replace with:

S1-02440880000 MTR,COND,NO CONTROLLER,1/3 HP,208/230V

Or

S1-02440885000 CONTROLLER,COND,1/3 HP,PWM,208/230V

S1-32440880006 MTR,COND,W/ CNTRL,1/3 HP,875RPM,208/230V

Or

S1-02440880000 MTR,COND,NO CONTROLLER,1/3 HP,208/230V

Replace with:

S1-02440880000 MTR,COND,NO CONTROLLER,1/3 HP,208/230V

Or

S1-02442225000 CONTROLLER,COND,1/3 HP,875RPM,208/230V

S1-32440880007 MTR,COND,W/ CNTRL,1/3 HP,682RPM,208/230V

Or

S1-02440880000 MTR,COND,NO CONTROLLER,1/3 HP,208/230V

Replace with:

S1-02440880000 MTR,COND,NO CONTROLLER,1/3 HP,208/230V

Or

S1-02442223000 CONTROLLER,COND,1/3 HP,682RPM,208/230V

S1-32440880008 MTR,COND,W/ CNTRL,1/3 HP,917RPM,208/230V

Or

S1-02440880000 MTR,COND,NO CONTROLLER,1/3 HP,208/230V

Replace with:

S1-02440880000 MTR,COND,NO CONTROLLER,1/3 HP,208/230V

Or

S1-02442226000 CONTROLLER,COND,1/3 HP,917RPM,208/230V

S1-32440880009 MTR,COND,W/ CNTRL,1/3 HP,834RPM,208/230V

Or

S1-02440880000 MTR,COND,NO CONTROLLER,1/3 HP,208/230V

Replace with:

S1-02440880000 MTR,COND,NO CONTROLLER,1/3 HP,208/230V

Or

S1-02442224000 CONTROLLER,COND,1/3 HP,834RPM,208/230V

This service letter will allow one hour labor to be claimed for replacement of a **failed service part fan motor or failed service part fan motor kit** on the above listed models. This letter is to be used on a fix-on-fail basis only. File a warranty claim using the service letter number. The warranty claim must include the invoice from the servicing dealer.

This letter does NOT cover outdoor equipment still containing Regal 142R fan motors. Regal 142R was phased out of production in late 2020. The replacement motor kit however may still be covered under standard unit warranty if standard warranty has not expired.

Retain ALL failed / returned outdoor fan motor parts (motor and / or controller) for a period of 30 days after warranty claim approval, per the warranty manual. In conjunction with the motor vendor, the CWE (Center of Warranty Excellence) will be conducting audits of claimed parts. You may be contacted and provided a shipping label for part returns. Dealers should be placing failed parts in the shipping carton the replacement parts came in as to protect the failed part during transit. The purpose of part return and analysis is for continuous improvement. Parts failed during transit cannot be properly tested.

After further analysis of returned parts, this letter may be revised or extended at our discretion.

If you have any questions on this, feel free to call Ducted Systems Technical Services at 1-877-UPG-SERV and speak with a technical support representative or contact your Regional Technical Service Manager.



Casey McConaughy
UPG Regional Technical Service Manager
Ducted Systems Technical Services - Johnson Controls