

Universal Fan Motor Kit #2 Installation



STOP! All work detailed in these instructions must be done by a qualified technician.



Subject: Universal Fan Motor Kit #2

Date: September 06, 2022

Models / Parts Affected: See 115V and 230V fan motor part numbers listed below

Voltages: All voltages

Overview

Universal Fan Motor Kit #2 replaces multiple motor sizes and blade drive hubs; some kit components may not be used for your application.

Please review the information for installation instructions to determine the components your application requires.



NOTE: Before you remove the fan motor, be sure to note the fan blade orientation and the existing wire configuration.

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Fan Motor Identification

The existing fan motor will have a label with identifying information on either the back or side of the motor. See fig. 1.

The 115V (P#830037) and 230V (P#830038) universal replacement fan motor kits replace the fan motor part numbers listed below. Please see table 1 (next page) for more detailed information.

115V				230V			
209510	800446	826840	938406	977369	800404	800471	936926
800401	800448	837695	939345	980157	800405	800473	936941
800402	800451	837869	947038	980158	800412	818617	944109
800407	800454	911604	947227	982926	800415	823770	948823
800410	800455	911686	947862	989025	800416	826841	948825
800411	800457	912674	948822	989107	800418	837755	952776
800426	800458	916650	948824	989719	800421	837870	960272
800432	800465	922036	950288	989720	800443	913301	960273
800437	800469	923267	960274	989721	800449	915461	
800438	800470	927367	960359	989722	800452	924007	
800439	800472	933009	960360	994150	800459	930207	
800440	818618	933112	963174				
800441	823769	936833	965151				

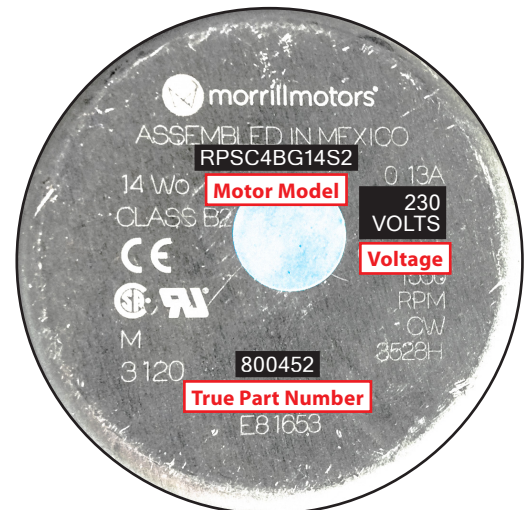


Fig. 1. Fan motor label. Label shown is on the back of the fan motor.

Kit Components

- 1 – Replacement Fan Motor
- 1 – Drive Hub
- 1 – Washer
- 1 – Spacer
- 1 – Tall Fan Motor Bracket*
- 1 – Short Fan Motor Bracket*
- 2 – T-Bolts
- 3 – 8-32 x 1/4" x 1/4" Phillips screws
- 3 – 8-32 x 11.5mm Phillips screws
- 4 – M4 Flange Nut
- 3 – 5-way lever connectors

*For use with 977369 SSC2 Low Profile Motor

Required Tools

Required tools include (but may not be limited to) the following:

- Wire Strippers
- Phillips Screwdriver
- 1/4" Hex Head Driver
- 3/8" Hex Head Driver
- Drill

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Table 1. Fan Motor Part Numbers

The replacement 115V and 230V fan motors replace the part numbers listed in the table below.

Fan Motor Model	Existing Wire Configuration	115V Part Number				230V Part Number		
ECFD	BROWN & BLACK to Line BLUE to Neutral	818618				818617		
		823769				823770		
		826840				826841		
		837695				837755		
		837869				837870		
ESP / PSC / SP	SMOOTH to Line RIBBED to Neutral	800401	800446	936833	963174	800404	800421	930207
		800402	800448	938406	965151	800405	800443	936926
		800407	800458	939345	982926	800412	800459	944109
		800410	800465	947038	994150	800415	800471	960272
		800411	800469	947227		800416	913301	960273
		800426	800470	947862		800418	915461	
		800437	800472	960274				
		800439	912674	960359				
		800441	933112	960360				
IQ3608 / IQ3612	BROWN to Line BLUE to Neutral BLACK to Compressor (TDE only)	209510	980157	989720		948823		
		800432	980158	989721		948825		
		948822	989025	989722		952776		
		948824	989107					
		950288	989719					
RPSC	<i>With</i> a Timer WIRE FROM 1 to Line WIRE FROM 3 to Neutral	800438				800449		
		800440				800452		
		800457				800473		
		880885				883138		
		923267				924007		
					936941			
	<i>Without</i> a Timer MIDDLE & RED FLAG to Line RIBBED & WHITE FLAG to Neutral SMOOTH to Signal	800451						
		800454						
		911686						
		916650						
927367								
SSC2	SMOOTH to Line RIBBED to Neutral	800455						
		911604						
		922036						
		933009						
	WHITE to Neutral BLACK to Line	211895						
		977369						
		979685						

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Installation

Drive Hub

The replacement fan motor comes with a four-nub drive hub (see fig. 2) installed. If the drive hub on the existing motor does not match this configuration, pry the four-nub drive hub off and install the provided single-nub drive hub (see fig. 3).



Fig. 2. The four-nub drive hub comes installed on the replacement fan motor.



Fig. 3. The existing fan blade may require the single-nub drive hub.

Spacer

The replacement fan motor comes with a spacer mounted directly on the motor's back to replace multiple fan motor sizes, as shown in fig. 4. If your application does not require the spacer, remove the spacer and discard it.

The following fan motors typically DO NOT use the spacer.

IQ3608
950288
980157
989720
989721

SSC2
977369



NOTE: Be sure to use the correct screws when mounting the fan motor to the bracket. Use the longer screws (fig. 5a) for applications with the spacer and the shorter screws (fig. 5b) for applications without the spacer.



Fig. 4. The spacer comes installed on the fan motor.

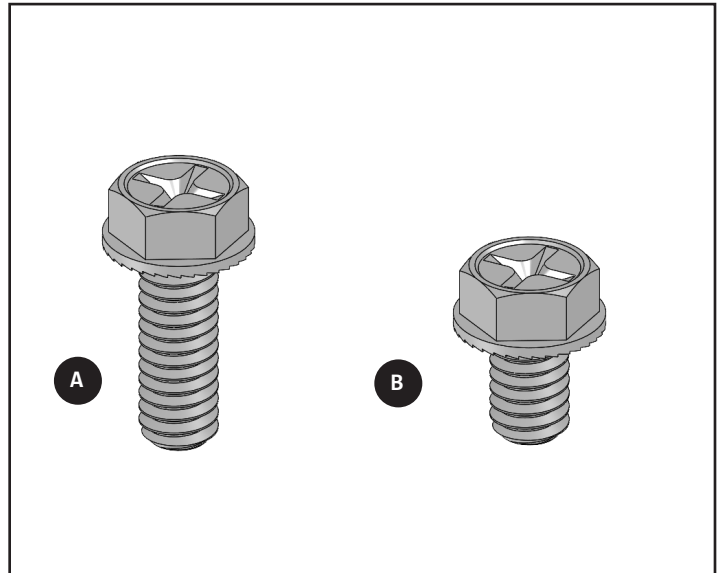


Fig. 5. Be sure to use the correct mounting screws. Use the longer screws (A) with the spacer and the shorter screws (B) without the spacer.



Universal Fan Motor Kit #2 Installation

Installation (cont.)

Fan Motor Mounting Bracket

Most applications will use the existing fan motor bracket. See installation details below.

NOTE: Be sure to note the fan blade orientation before removing the fan motor.



CAUTION! Electrical shock or burn hazard. Powering off an electronic control does not remove power from all components. Unplug the unit or turn off the power supply before installation.

A-Brackets

1. Cut/disconnect the wire connections to the existing fan motor.
2. Slide the t-bolts into the replacement motor's slots until the bolts are fully seated. See fig. 6.
3. With the provided hardware, install the fan motor on the A-bracket. See fig. 7.
4. Proceed to fan blade installation on page 6.

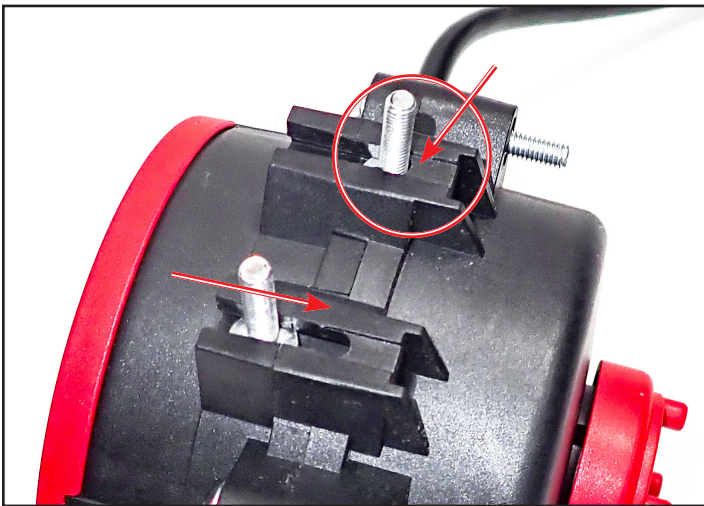


Fig. 6. Be sure the T-bolts are fully seated in the slots.

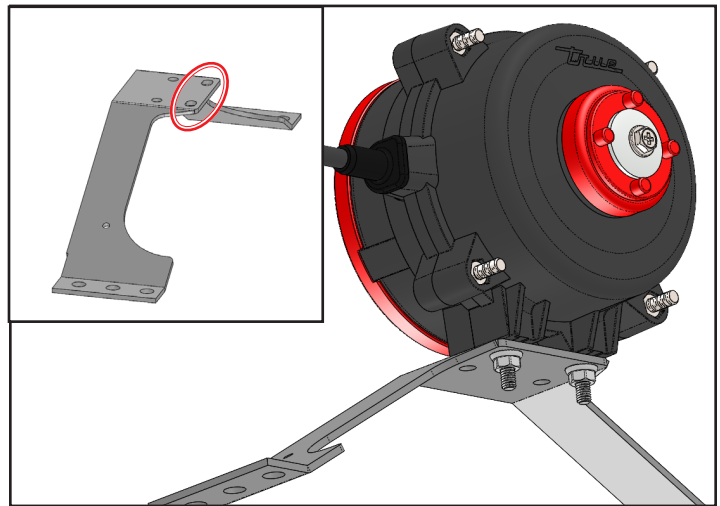


Fig. 7. Replacement fan motor installed on an A-bracket. Use the front mounting holes (circled).

Front-Mounting Brackets

Front-mounting brackets use the threaded studs protruding from the front of the replacement motor.

1. With the provided hardware, install the bracket onto the replacement fan motor. See fig. 8.
2. Verify the spacer does not interfere with the installation. If it does, remove and discard the spacer.
3. Proceed to fan blade installation on page 6.

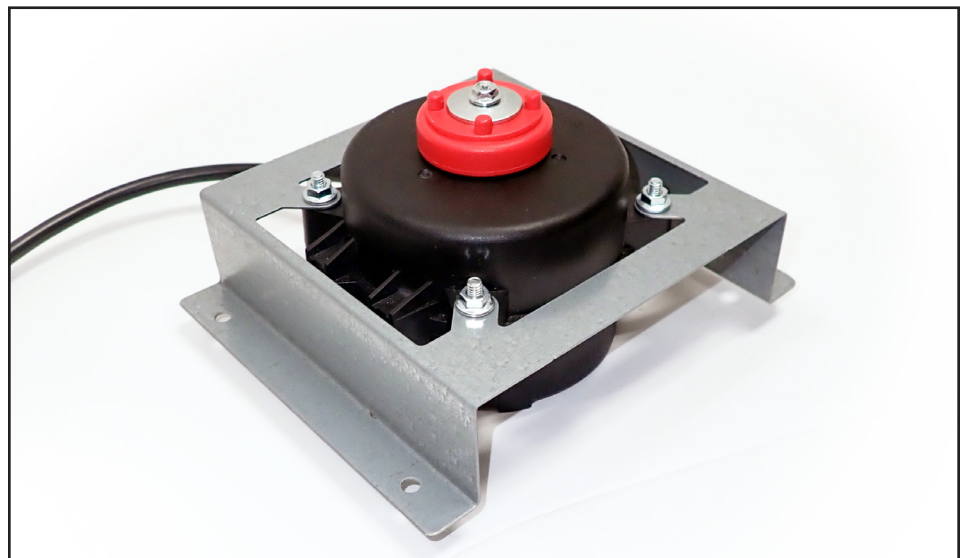


Fig. 8. Front-mount bracket installed on the replacement fan motor.



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Installation (cont.)

Rear-Mounting Brackets

Rear-mounting brackets install on the non-drive end of the motor.

1. Determine if the spacer is required for the installation (see "Spacer" on page 3). If not, remove and discard the spacer.
2. With the correct sized screw (see "Spacer" on page 3) install the replacement fan motor onto the bracket. See fig. 9.

NOTE: Do not overtighten the screw. Torque the screw to 18 ± 1 in-lb (2.0 ± 0.1 Nm).

3. Proceed to fan blade installation on page 6.

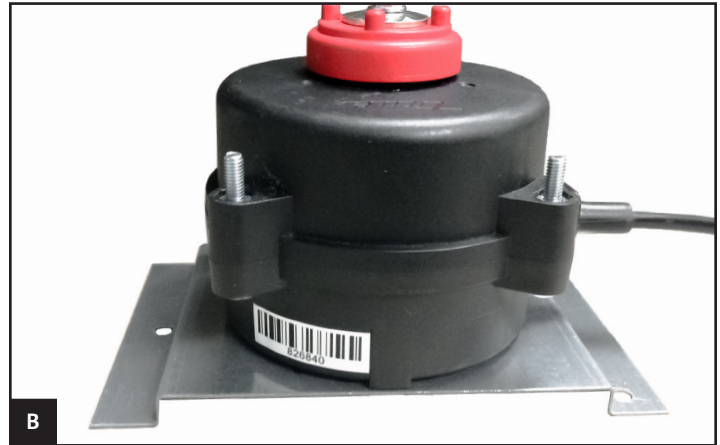
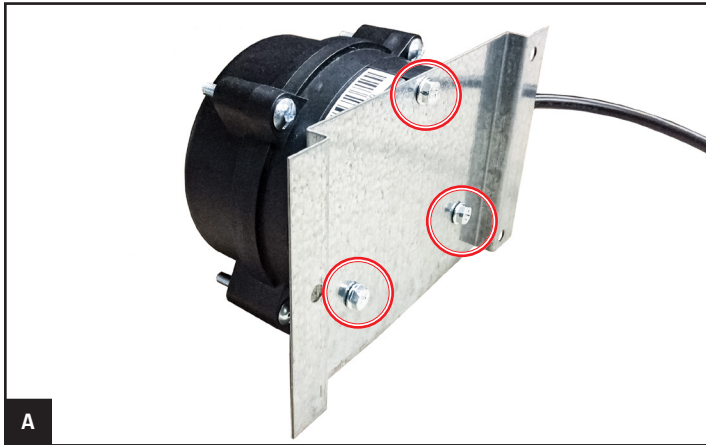


Fig. 9. The rear-mounting bracket installed on the fan motor without the spacer.

Low-Profile Brackets (Provided) for SSC2 Fan Motor P#977369

The replacement fan motor *DOES NOT* mount like-for-like as the existing SSC2 fan motor P#977369.

Use the provided low-profile bracket appropriate for your application. See figs. 10-13 for comparisons between the existing fan motor installation and the replacement fan motor installation..

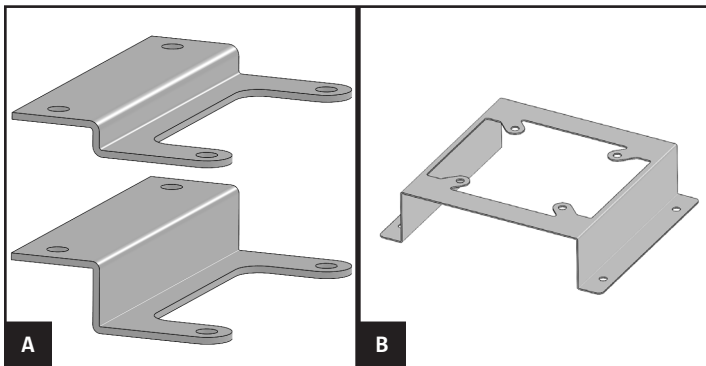


Fig. 10. For the existing short low-profile brackets (A), use the provided bracket that mounts on the drive end of the motor (B).

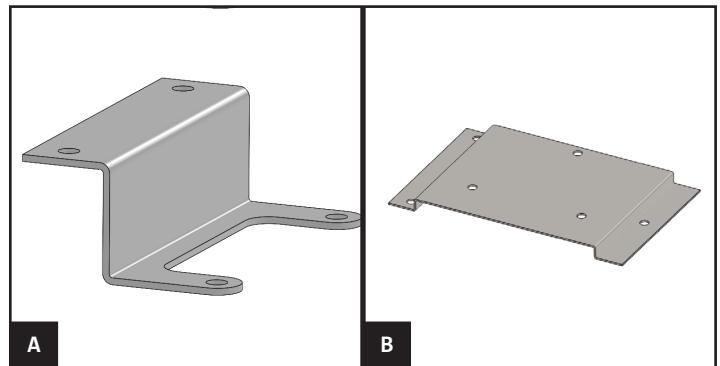


Fig. 11. For the existing tall low-profile brackets (A), use the provided bracket that mounts on the non-drive end of the motor (B).

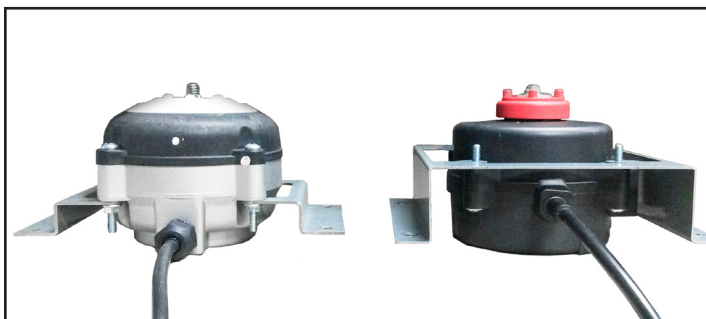


Fig. 12. Existing vs. replacement short low-profile bracket installation.



Fig. 13. Existing vs. replacement tall low-profile bracket installation.



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Installation (cont.)

Fan Blade Installation

Use the existing fan blade when installing the replacement fan motor. If the fan blade needs replacement, please contact our parts department at 800-424-8783 or PartsInquiries@TrueMfg.com.

1. Remove the fan blade screw and the washer.
2. Verify the correct drive hub is installed on the replacement motor.
3. Position the fan blade on the replacement motor.
NOTE: Install the fan blade as originally oriented.
4. Install the washer and the fan blade screw. See fig. 14.
NOTE: Do not overtighten the screw. Torque the screw to 18 ± 1 in-lb (2.0 ± 0.1 Nm). Be sure the washer slopes down and away from the center of the fan motor.



Fig. 14. Be sure the washer slopes down and away from the center of the fan motor.

115V / 230V Replacement Fan Motor Wiring Instructions

Locate the True part number of the existing fan motor in tables 2-5 for wiring instructions. The tables are divided by voltage and location inside the cabinet. Then, with the provided lever connectors, wire the replacement fan motor.

NOTE: Some part numbers appear in both the condenser and evaporator fan motor wiring tables. Be sure to follow the correct wiring instructions for your application.

Preparing Wires on Existing Fan Motors With Timers

The replacement fan motor does not use the existing timer.

NOTE: Be sure to mark the leads as described below before disconnecting the timer.

1. Locate the timer and timer plug.
2. Mark the wire connected to terminal 1 as **Line**. See fig. 15.
3. Mark the wire connected to terminal 3 as **Neutral**. See fig. 15.
4. Cut the marked wires. See fig. 15.
NOTE: Be sure the labels stay on the marked wires.

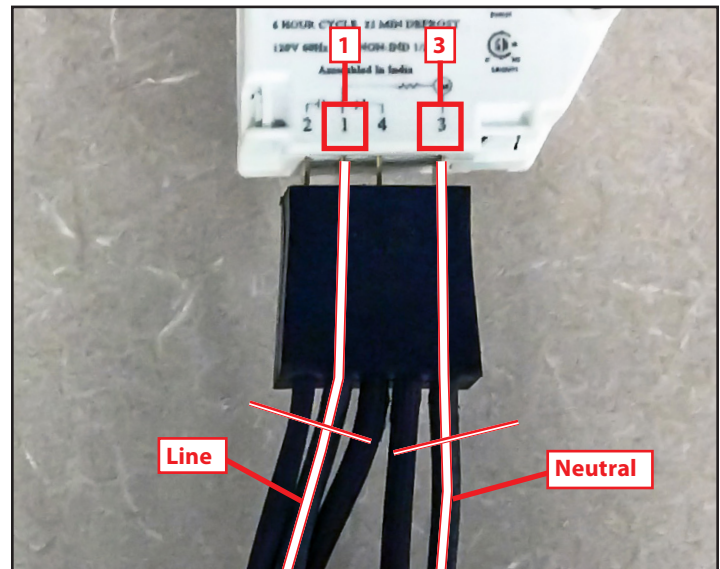


Fig. 15. Cut the marked wires close to the timer plug as shown by the dashed lines. Be sure the labels stay on the marked wires.

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Installation (cont.)

Table 2. 115V Condenser Fan Motor Wiring Instructions

Fan Motor Model	Part Numbers	Existing Motor Wire Configuration		Replacement Motor Connection
ECFD	823769	BROWN & BLACK / Line	To	<u>BROWN</u> & <u>BLACK</u>
	818618 826840 837695 837869	BLUE / Neutral	To	<u>BLUE</u>
ESP / PSC / SP	800401	SMOOTH / Line	To	<u>BROWN</u> & <u>BLACK</u>
	800402		To	
	800407	RIBBED / Neutral	To	<u>BLUE</u>
	800411			
	800426			
	800432			
	800439			
	800446			
	800448			
	800458			
800465				
800469	994150	800470		
IQ3608 / IQ3612	209510	BROWN / Line	To	<u>BROWN</u>
	948824	BLUE / Neutral	To	<u>BLUE</u>
	989025 989107			<u>BLACK</u> not used; cap the wire
RPSC With a Timer*	800438	WIRE FROM 1 / Line	To	<u>BROWN</u> & <u>BLACK</u>
	800440 800457 880885 923267	WIRE FROM 3 / Neutral	To	<u>BLUE</u>
RPSC Without a Timer	800451	MIDDLE & RED FLAG / Line	To	<u>BROWN</u> & <u>BLACK</u>
	800454	RIBBED & WHITE FLAG / Neutral	To	<u>BLUE</u>
	911686	SMOOTH / Signal		
	916650 927367			
SSC2	911604	SMOOTH / Line	To	<u>BROWN</u> & <u>BLACK</u>
	922036	RIBBED / Neutral	To	<u>BLUE</u>
	211895	BLACK / Line	To	<u>BROWN</u> & <u>BLACK</u>
	977369 979685 989497	WHITE / Neutral	To	<u>BLUE</u>

*See "Preparing Wires on Existing Fan Motors *With* Timers" on page 6.

Universal Fan Motor Kit #2 Installation

Installation (cont.)

Table 3. 115V Evaporator Fan Motor Wiring Instructions

Fan Motor Model	Part Numbers	Existing Motor Wire Configuration		Replacement Motor Connection
<i>ECFD</i>	818618	BROWN / Line	To	<u>BROWN</u>
	823769	BLUE / Neutral	To	<u>BLUE</u>
	826840			
	837695 837869	BLACK (not used; wire capped)	To	<u>BLACK</u>
<i>ESP / PSC / SP</i>	800401	SMOOTH / Line	To	<u>BROWN</u>
	800402			
	800407	RIBBED / Neutral	To	<u>BLUE</u>
	800410			<u>BLACK</u> not used; cap the wire
	800411			
	800426			
	800432			
	800437			
	800441			
	800446			
	800448			
	800458			
<i>IQ3608 / IQ3612</i>	948822	BROWN / Line	To	<u>BROWN</u>
	950288			
	980157	BLUE / Neutral	To	<u>BLUE</u>
	980158			
	989421	BLACK / Compressor Voltage (TDE only) (not used; wire capped)	To	<u>BLACK</u> not used; cap the wire
	989719			
	989720 989722			
<i>SSC2</i>	800455	SMOOTH / Line	To	<u>BROWN</u>
	911604			
	922036	RIBBED / Neutral	To	<u>BLUE</u>
	933009			<u>BLACK</u> not used; cap the wire
	211895	BLACK / Line	To	<u>BROWN</u>
	977369			
	979685 989497	WHITE / Neutral	To	<u>BLUE</u>
			<u>BLACK</u> not used; cap the wire	

Universal Fan Motor Kit #2 Installation

Installation (cont.)

Table 4. 230V Condenser Fan Motor Wiring Instructions

Fan Motor Model	Part Numbers	Existing Motor Wire Configuration		Replacement Motor Connection
<i>ECFD</i>	818617	BROWN & BLACK / Line	To	<u>BROWN</u> & <u>BLACK</u>
	823770 826841 837755 837870	BLUE / Neutral	To	<u>BLUE</u>
<i>ESP / PSC / SP</i>	800404	SMOOTH / Line	To	<u>BROWN</u> & <u>BLACK</u>
	800405	RIBBED / Neutral	To	<u>BLUE</u>
	800415			
	800416			
	800443			
	800459			
	800471			
	913301			
	930207			
	936926			
948823				
948825				
960272				
<i>RPSC</i> <i>With a Timer*</i>	800449	WIRE FROM 1 / Line	To	<u>BROWN</u> & <u>BLACK</u>
	800473 883138 924007	WIRE FROM 3 / Neutral	To	<u>BLUE</u>
<i>RPSC</i> <i>Without a Timer</i>	800452	MIDDLE & RED FLAG / Line	To	<u>BROWN</u> & <u>BLACK</u>
	936941	RIBBED & WHITE FLAG / Neutral	To	<u>BLUE</u>
		SMOOTH / Signal		

*See "Preparing Wires on Existing Fan Motors *With* Timers" on page 6.

Universal Fan Motor Kit #2 Installation

Installation (cont.)

Table 5. 230V Evaporator Fan Motor Wiring Instructions

Fan Motor Model	Part Numbers	Existing Motor Wire Configuration		Replacement Motor Connection
<i>ECFD</i>	818617	BROWN / Line	To	<u>BROWN</u>
	823770	BLUE / Neutral	To	<u>BLUE</u>
	826841	BLACK (not used; wire capped)	To	<u>BLACK</u>
	837755 837870			
<i>ESP / PSC / SP</i>	800404	SMOOTH / Line	To	<u>BROWN</u>
	800405	RIBBED / Neutral	To	<u>BLUE</u>
	800412			<u>BLACK</u> not used; cap the wire
	800415			
	800416			
	800418			
	800421			
	800459			
	915461			
	936926			
944109				
948823				
960273				
<i>IQ3608</i>	952776	BROWN / Line	To	<u>BROWN</u>
		BLUE / Neutral	To	<u>BLUE</u>
		BLACK / Compressor Voltage (not used; wire capped)	To	<u>BLACK</u> not used; cap the wire

Questions or Concerns

For more information, please contact our Technical Service team. See contact information below.

North America – USA, Canada & Caribbean

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Warranty Fax: +1 636 980 8510
Warranty Email: WarrantyInquiries@TrueMfg.com
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8:00am-12:00pm Saturday

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