MDM McDANIEL METALS HVAC ACCS. ESTD. 1982

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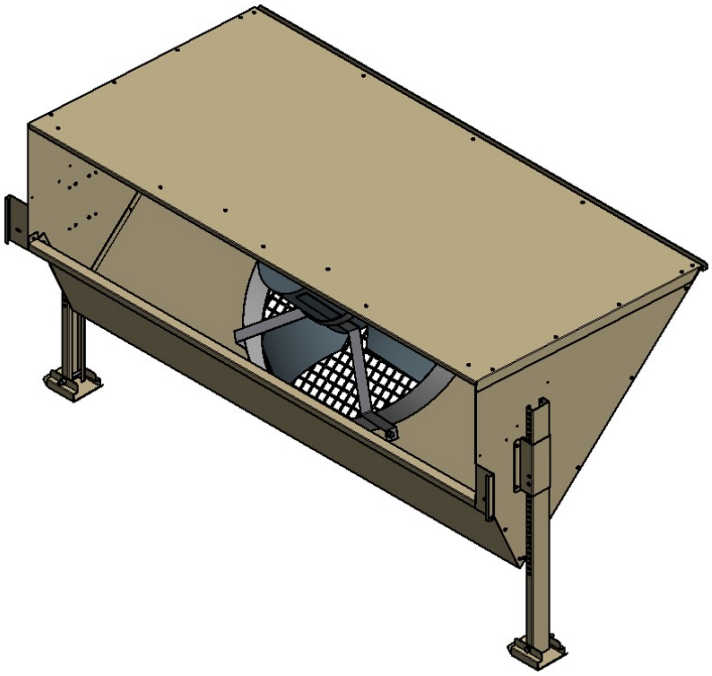
144-DK-0902

DOWNFLOW POWER EXHAUST FITS DAIKIN
DB*090-150, DR*090-150, & DF*090-150
0270L02673MC



SEQUENCE OF OPERATION

This sequence assumes employment of a single enthalpy economizer using a two stage thermostat.

1. A call for cooling comes from room thermostat.
2. The enthalpy sensor determines if the atmospheric conditions are conducive for using outside air for cooling. If YES, the fresh air damper section of the economizer begins to open.
3. The EXH SET potentiometer should be set such that when the fresh air dampers are open approximately 70% of their full open capacity, EXH1 is energized and the power exhaust is powered to draw the relief air from the space. There is a 60 +/-30 second time delay built into the economizer control before the fan motor actually energizes.
4. When the dampers modulate below the 70% open position due to a satisfied thermostat or atmospheric conditions, the power exhaust disengages immediately.

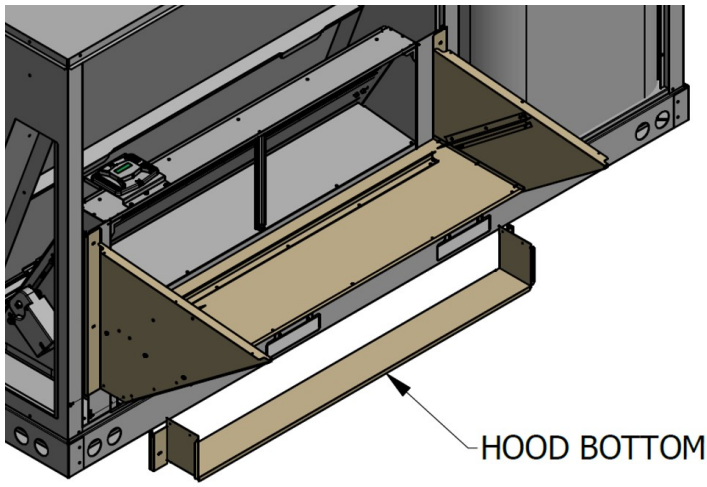
NOTE

FOR A HORIZONTAL APPLICATION, SEE INSTALLATION INSTRUCTION 115-DK-090PE FOR ATTACHMENT OF THE POWER EXHAUST TO THE DUCT ADAPTER.

INSTALLATION WITH ECONOMIZER

1. Open carton and inspect contents for shortages and damage.
2. Disconnect the power to the unit.
3. If the economizer is already fully installed, remove the Hood Bottom, per Figure 1. Remove the Baffle Sides, Baffle Front & both Leg Assemblies, per Figure 2 (retain all screws). If a new installation, do not install these parts.
4. Remove the filter access panel.
5. Plug the power harness into the mating 4-pin connector in the return cavity of the rooftop unit. If one doesn't exist, cut the connector off the harness, and wire it to a separate disconnect.
6. Per Figure 3, feed the line voltage and low voltage wires through the knockouts provided in the lower right section of the damper of an upflow economizer. For a horizontal economizer application, feed these wires through the return duct.
7. Per Figure 4, block up the power exhaust, slide it into the economizer hood and align 4 holes in each hood side with power exhaust holes, and attach with retained holes. Screw power exhaust into unit 2 places with retained baffle screws.
8. Per Figure 4, slide the stabilizer legs through the guides of the power exhaust and fasten with provided bolts and nuts.
9. Per Figure 5 and attached wiring diagrams, plug the 2X provided 6-Pin terminal blocks into the right side of the Jade controller. Connect the power exhaust low voltage control leads to these terminal blocks, as shown.
10. Per the wiring diagram, connect the power exhaust L1 and L2 high voltage power harness female spade connectors to the power exhaust fuse block.
11. On the Jade controller, set the position at which the exhaust will energize under the SETPOINTS menu.
12. Reinstall the filter access panel.

Figure 1



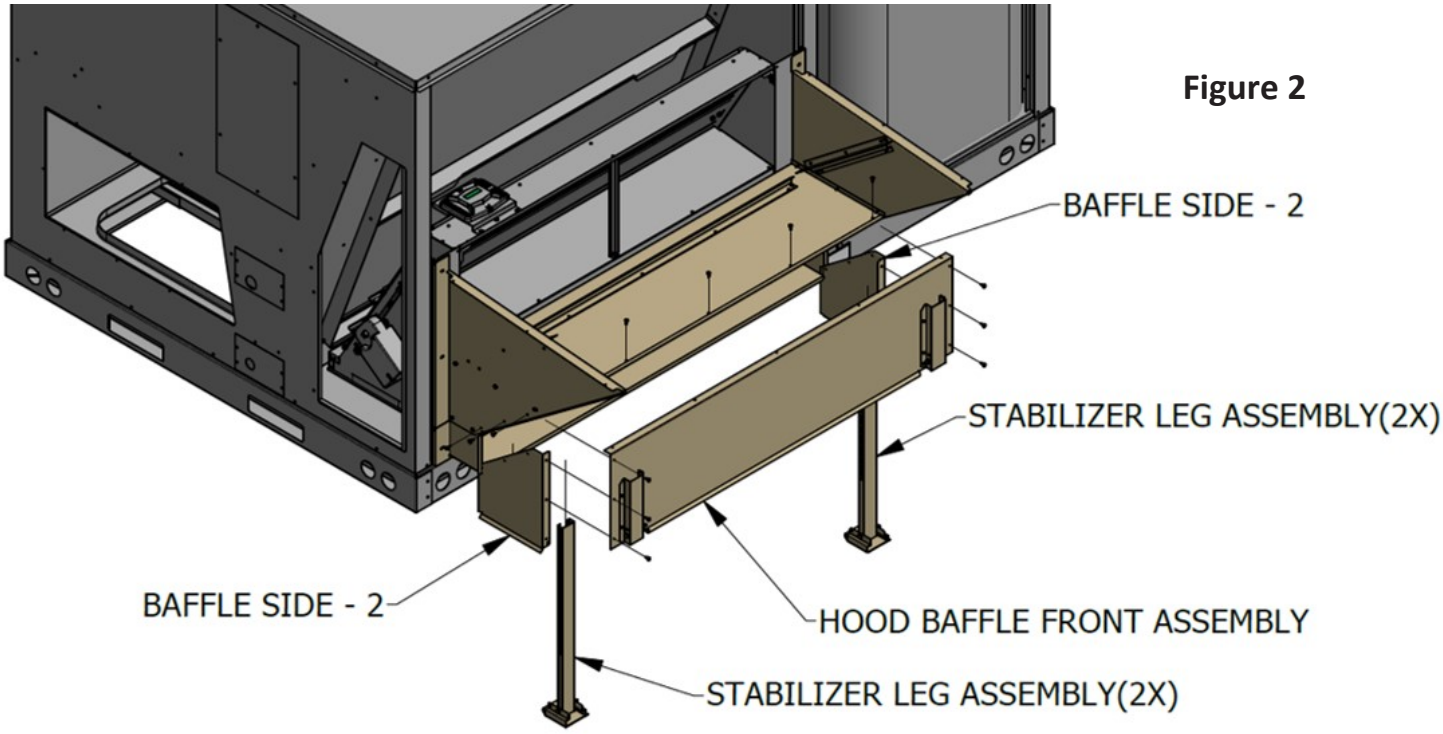


Figure 2

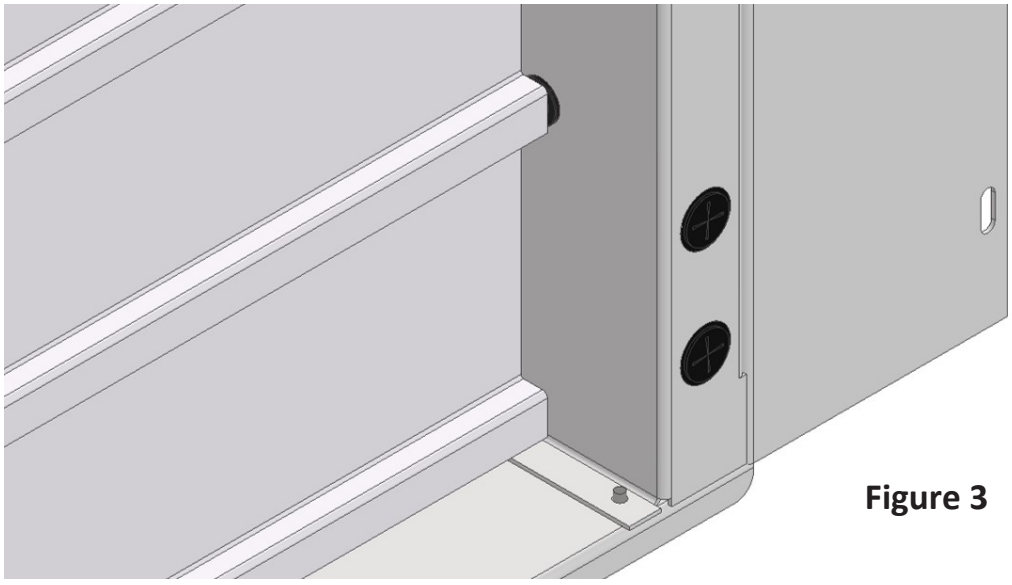
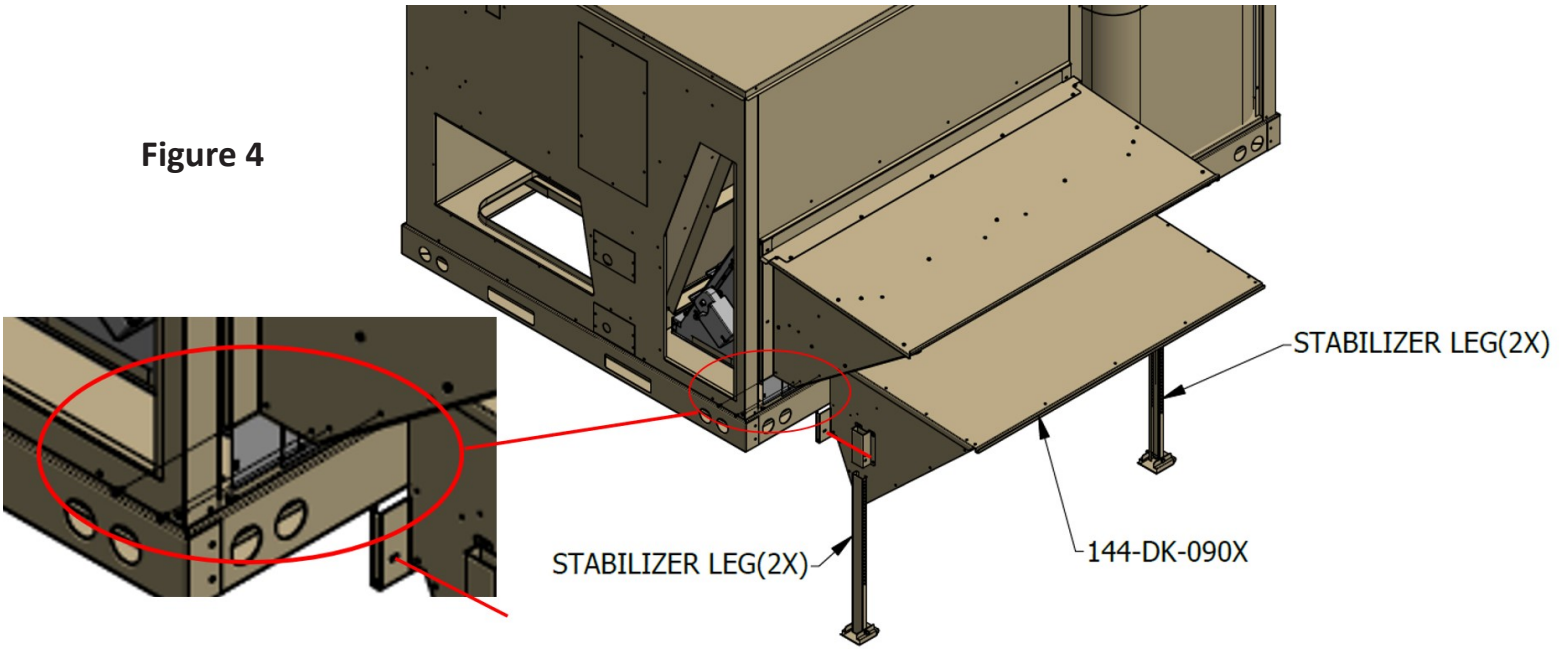


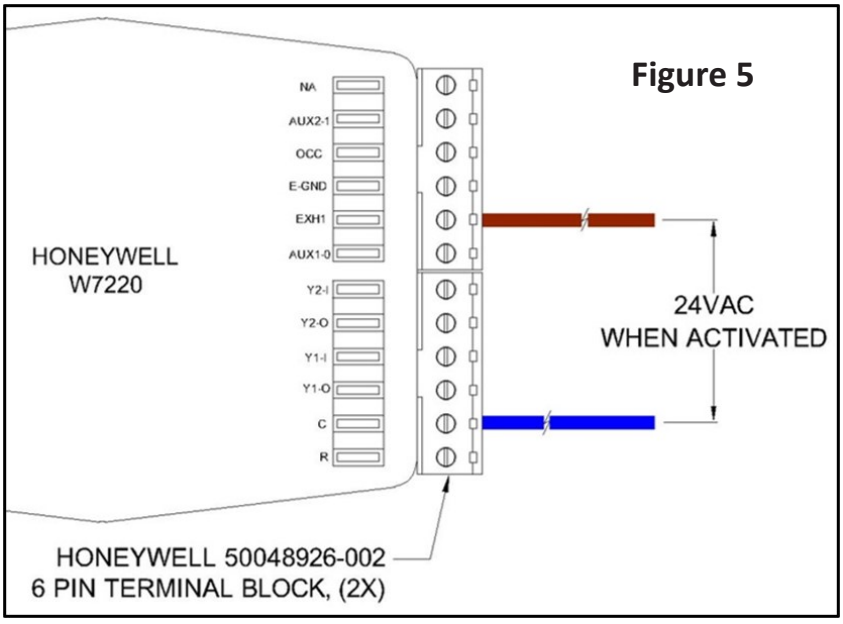
Figure 3

Figure 4



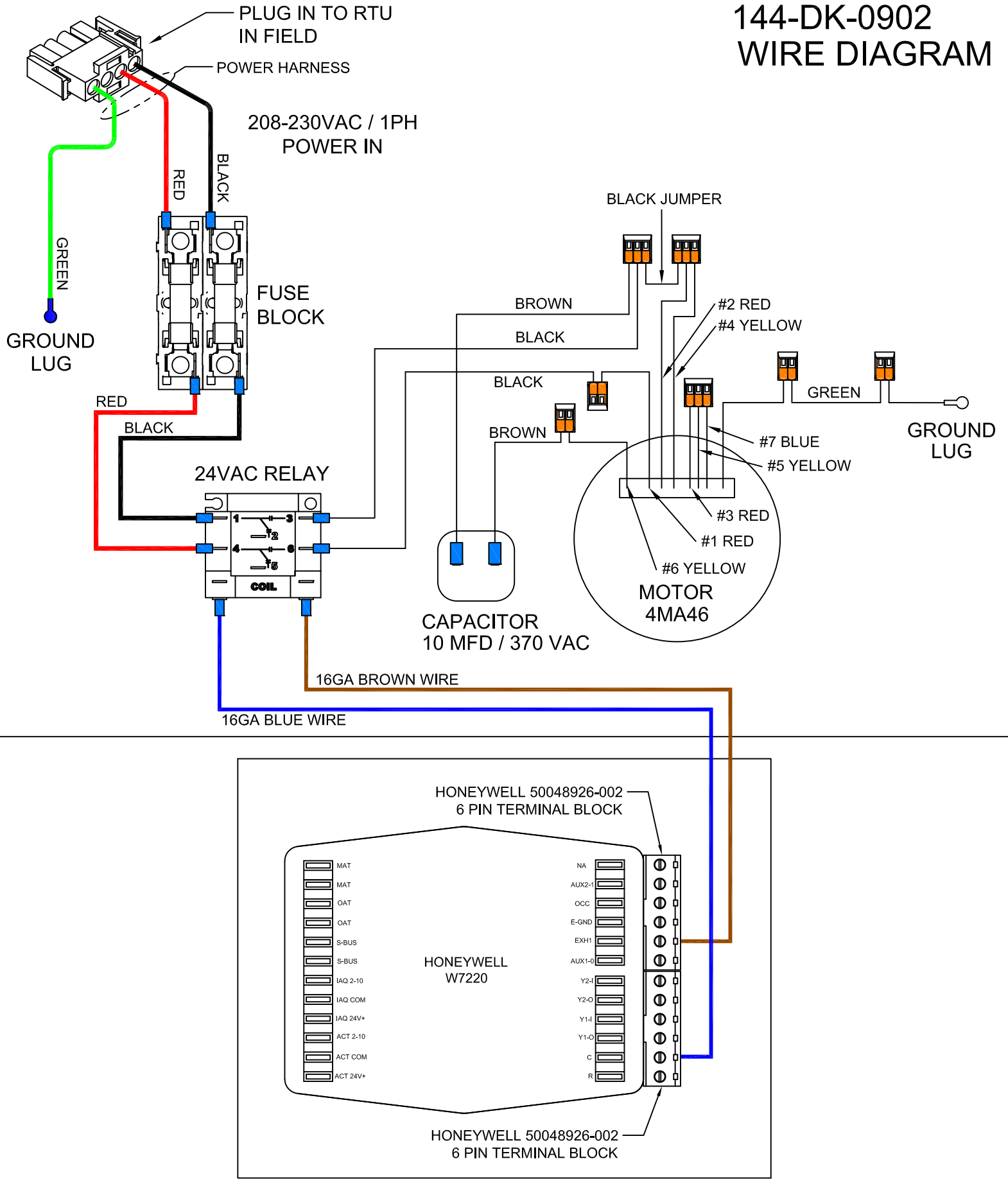
CONTENTS	
QTY	DESCRIPTION
1	POWER EXHAUST
2	LEG ASSEMBLY
1	POWER HARNESS ASSEMBLY
2	1/4-20UNC X 2-3/4" LG. HEX HD BOLT
2	1/4-20UNC SELF-LOCKING NUT
2	6-POLE TERMINAL BLOCK
1	INSTALLATION INSTRUCTIONS

Figure 5



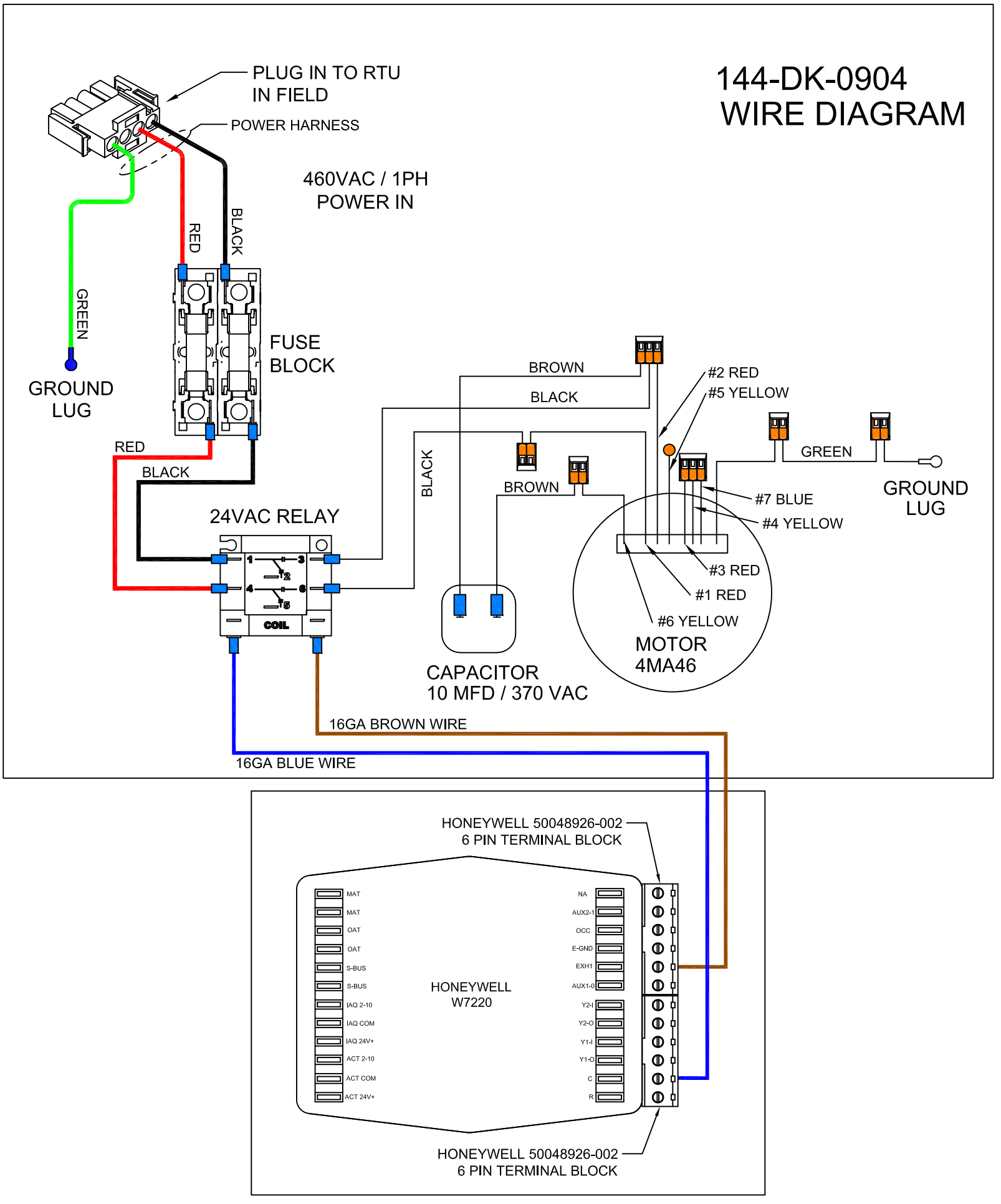
Model	Voltage	Motor						
		HP	RPM	Type	FLA	MCA	FUSE SIZE	SPEEDS
144-DK-0902	208/230-1-60	1/2	1075	Direct Drive	2.4	3.0	5	1
144-DK-0904	460-1-60	1/2	1075	Direct Drive	1.2	1.5	3	1
144-DK-0907	575-1-60	1/2	1100	Direct Drive	1.1	1.4	3	1

144-DK-0902 WIRE DIAGRAM



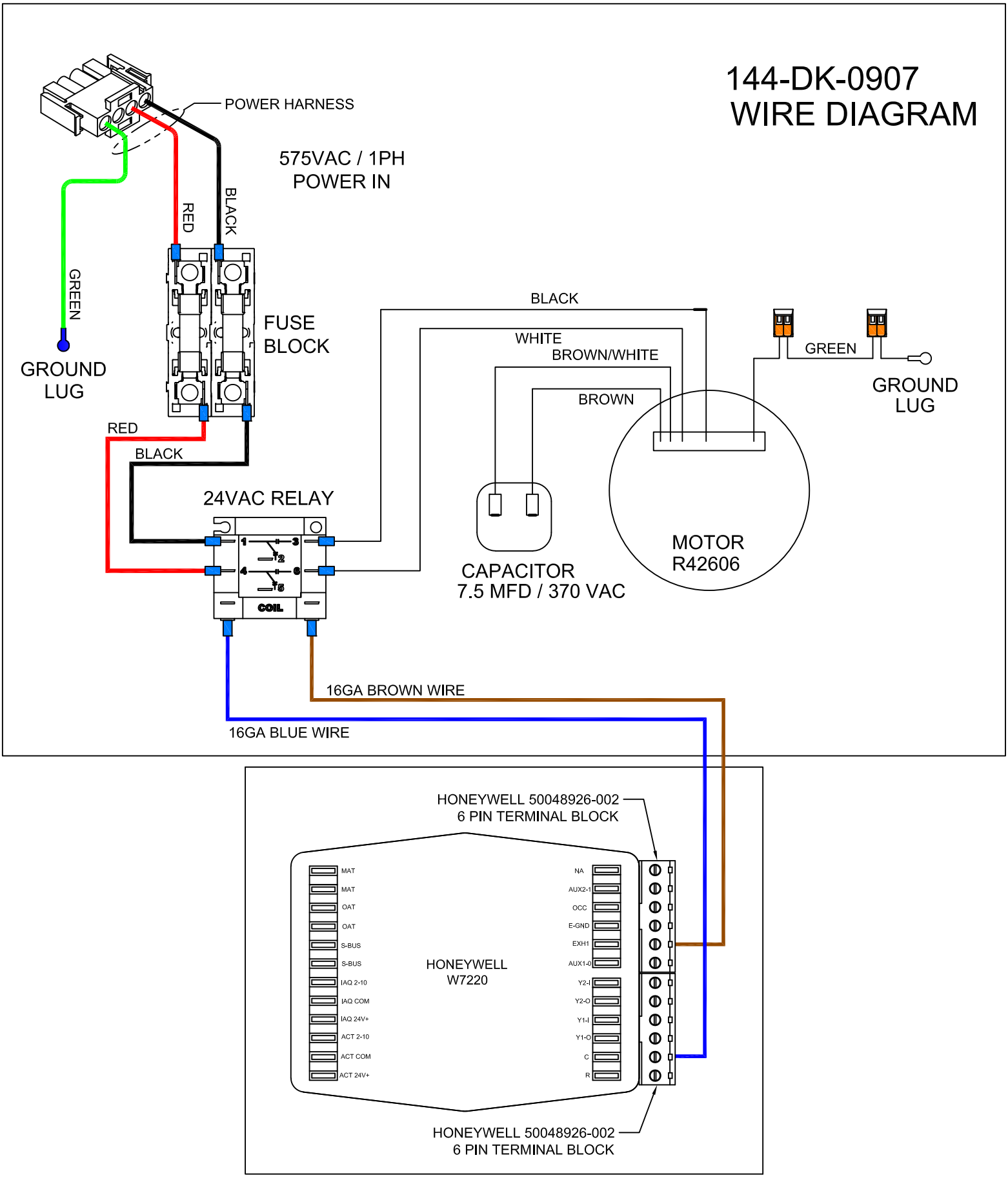
Rev. D 04/04/2023

144-DK-0904
WIRE DIAGRAM



Rev. D 04/04/2023

144-DK-0907
WIRE DIAGRAM



Rev. D 04/04/2023

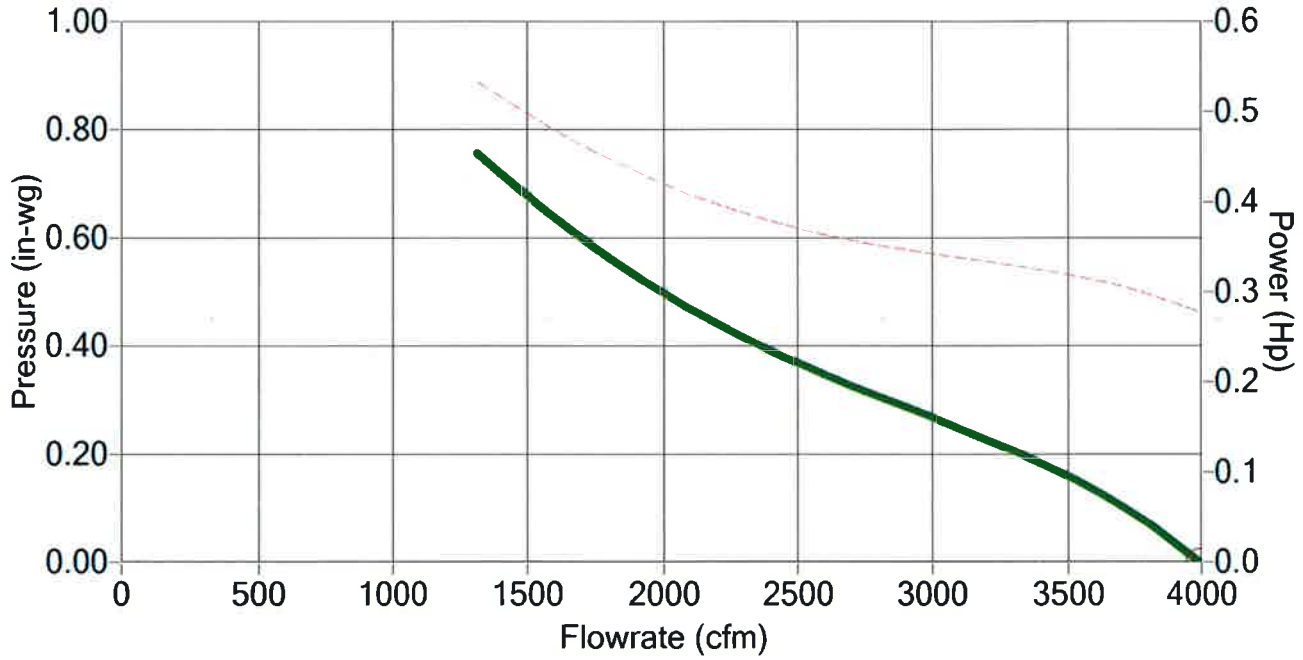
Lau Selection #1

MODEL F08Y202033

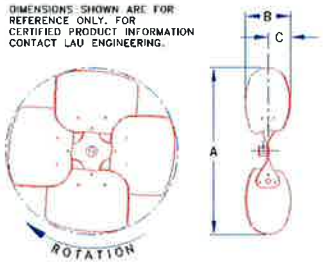
Selection Input	Input Flow	Input Pressure	Temperature	Altitude	Q Derate	P Derate	VAV Set Point		Date
	4000 CFM	0.00 in-wg	70 F	0 ft	0 CFM	0.00 in-wg	0.00 in-wg		04-22-2015

Selection Output	Flow	Pressure	Power	Static Efficiency	Total Efficiency	Speed	Outlet Velocity		
	3990 CFM	0.00 in-wg	0.28 hp	0.0 %	40.5 %	1100 rpm	1741 fpm		
	Impeller Diameter	Outlet Area	Max Speed	Pitch	Drive	Blades	P Volume	Turndown	
	20.0 in	2.29 ft²	1600 rpm	33 deg	Direct Drive	4	0.7 ft³	100 %	

Performance



Sound	63	125	250	500	1000	2000	4000	8000	Lw	LwA
	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A



A	B	C
20.00	3.87	1.69

Dimensions in inches

Notes: Airflow performance data are obtained in accordance with AMCA 210-07. Installed performance will vary depending on extent of cabinet geometry

Options

Available Bore: 5/16, 3/8, 1/2 and 5/8 inch
Keyway: Available in bore sizes 1/2 inch or larger
Blade Material: Aluminum
Spider Material: Painted Steel, Galvanized Steel
Hub Location: Discharge side, Inlet side
Set Screw Quantity: 1 or 2
Rotation: Determine rotation by viewing discharge side of prop Clockwise or counterclockwise