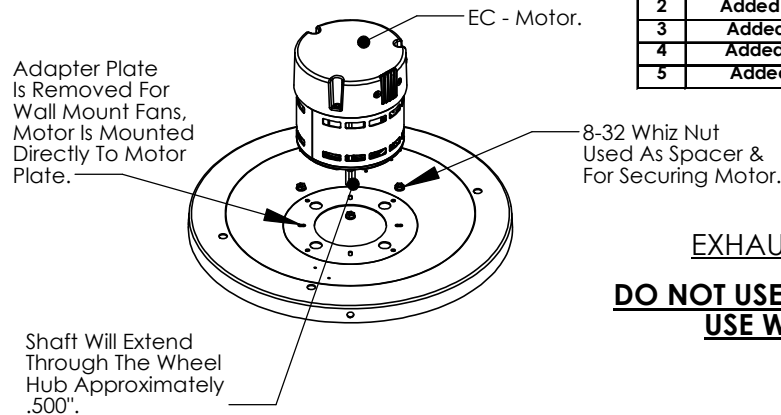


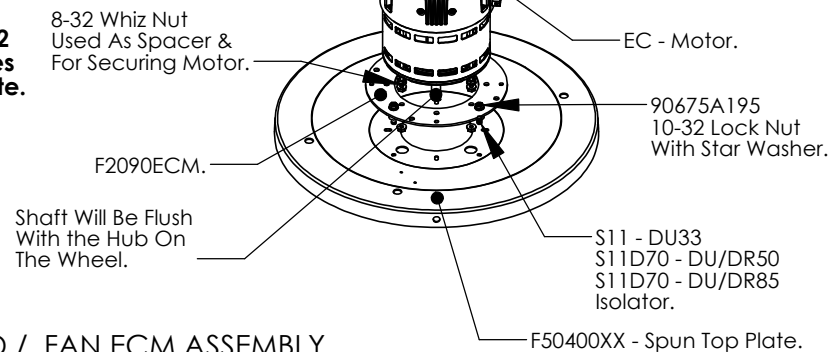
ECM-KIT Installation Instructions

- ECM kits are used to convert fans using PSC motors to EC motors.
- Review ECM kit number with details below. The kit number should match your fan number.
- Disconnect the power going to the fan.
- Remove the KB electronics speed control.
- Remove the PSC motor. If needed refer to the motor replacement instructions on ecommerce.
- Keep the hardware and isolators when removing the PSC motor.
- Isolators are not used on wall mount exhaust or with G10 DD MUA motor mount (built in).
- Make sure the wheel set screws are tightened up on the flats of the motor shaft.
- EC motors can be wired for 240Vac or 120Vac, verify primary voltage on the transformer.
- Attach the transformer to the Exhaust fan spun top plate using (2) 1/4-20 self drilling screws.
- Attach the transformer to the supply fan blower support using (2) 1/4-20 self drilling screws.
- Connect the black and white wires from the ECM wire harness to the SO or SJ cord from the fan disconnect. For **Telco** motors, also include the 16 AWG black and white wires (both 16 AWG and 22AWG white) from the motor lead to the harness and SO cord. Connect the ground to the grounding screw. Suitably sized wire nuts should be used, if the motor is being wired for 240Vac, the white wire should be marked using red electrical tape.
- Connect the ECM wire harness to the transformer. Connect the black and white wires (yellow terminal connectors) to the primary voltage. If the motor is being wired for 240Vac, the white wire should be marked using red electrical tape. Connect the black and red wires (blue terminal connectors) to the 24Vac secondary voltage.
- The other end of the black and red wires (blue terminal connectors) coming from the transformer secondary voltage 24Vac and the red 4 pin connector need to go to the junction to be connected to the VCU Controller. For **Telco** motors, the black 4 pin connector is at the end of the motor lead. Leave the red 4pin connector disconnected. Once connected the controller is secured to the junction box using screws.
- Connect the ECM wire harness to the Nidec motor. The 5 pin power connector is connected to the Nidec motor. The orange jumper is removed for 240Vac. If the motor is being wired for 240Vac the white wire should be marked using red electrical tape. **If the motor is 1/8 or 1/4 HP, there will only be one 12-prong connector to plug into the motor.** For **Telco** motors, the power connector on the harness can be left disconnected.
- Connect the ECM wire harness to the Nidec motor; the 4 pin communication connector is connected to the motor. For **Telco** motors, this connector can be left disconnected.
- Check all connections to make sure they are secure; the ECM wire harness should be free from moving parts. Secure the ECM wire harness to the exhaust fan top plate or MUA blower housing using cable ties.
- Once the power is reconnected and the fan disconnect switch is turned on the VCU Controller will display the motor RPM, you can make adjustments to the motor RPM by adjusting the screw to the left of the display on the EVO and the blue up and down buttons on the RTC controller.
- See HMUA wire harness for HMUA kit wiring instructions.

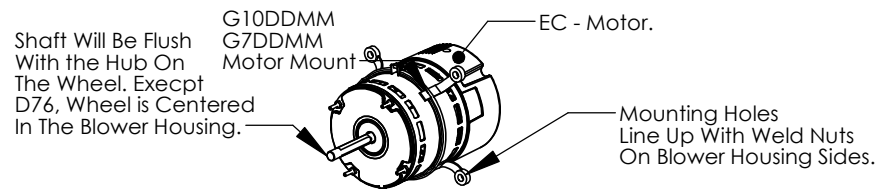
EXHAUST FAN ECM WALL MOUNT ASSEMBLY.



EC Motors on DU/DR 10 and 12 mount directly to the top plates without isolators or adapter plate.



MUA DD & HMUA DD / FAN ECM ASSEMBLY.



Revision History				
#	Description	Revised by	ECN#	Date
0	Released to production	N Perry	1527	3/24/10
1	ECM Transformer Update	N Perry	1964	3/31/10
2	Added S11D70 Isolator	N Perry	2149	9/15/10
3	Added HMUA details	N Perry	2248	4/27/11
4	Added ECMs to 10/12	J Hess	2696	4/25/14
5	Added Telco Motors	J Hess	2812	3/14/16

EXHAUST FAN ECM ASSEMBLY.

DO NOT USE S11 ISOLATORS ON DR33HFA USE WALL MOUNT ASSEMBLY

Used On	Kit Part #	HP	Motor	Qty	Speed Control	Qty	Wire Harness	Qty	Transformer	Qty	Motor/Adp Plate	Qty	8-32 Whiz Nuts	Qty	1/4-20 x 3/4 Whiz Nut	Qty	#12-14 x 3/4 Self Drilling	Qty
G10 DD HMUA	ECM-KIT-G10DD-HMUA-120V (-TEAO)	1	M055CUC0315-ECM-60 (BMN48-75011-60)	1	EVO/ECM-VCU-36-MP (ECM-VCU-RTC)	1	ECM-Harness-HMUA(-Telco)	1	BE141620GEK0032	1	G10DDMM	2	800036	8	800044	4	31817	6
D76 DD HMUA	ECM-KIT-D76DD-HMUA-120V (-TEAO)	1	M055CUC0315-ECM-60 (BMN48-75011-60)	1	EVO/ECM-VCU-36-MP (ECM-VCU-RTC)	1	ECM-Harness-HMUA(-Telco)	1	BE141620GEK0032	1	G7DDMM	2	800036	8	800044	4	31817	6
G10 DD	ECM-KIT-G10DD-120V (-TEAO)	1	M055CUC0315-ECM-60 (BMN48-75011-60)	1	EVO/ECM-VCU-36-MP (ECM-VCU-RTC)	1	ECM-Harness	1	BE141620GEK0032	1	G10DDMM	2	800036	8	800044	4	31817	6
DU/DR85HFA	ECM-KIT-85-120V (-TEAO)	3/4	M055CUL0316-ECM-60 (BMN48-56011-60)	1	EVO/ECM-VCU-36-MP (ECM-VCU-RTC)	1	ECM-Harness	1	BE141620GEK0032	1	F2090ECM	1	800036	8	N/A	0	31817	4
DU/DR50HFA	ECM-KIT-50-120V (-TEAO)	1/2	M055CUM0317-ECM-60 (BMN48-37511-60)	1	EVO/ECM-VCU-36-MP (ECM-VCU-RTC)	1	ECM-Harness	1	BE141620GEK0032	1	F2090ECM	1	800036	8	N/A	0	31817	4
DU/DR33HFA	ECM-KIT-33-120V (-TEAO)	1/3	M055CUN0318-ECM-60 (BMN48-25011-60)	1	EVO/ECM-VCU-36-MP (ECM-VCU-RTC)	1	ECM-Harness	1	BE141620GEK0032	1	F2090ECM	1	800036	8	N/A	0	31817	4
DU/DR12HFA	ECM-KIT-12-120V	1/4	M047PWAAD-ECM-60	1	EVO/ECM-VCU-36-MP	1	ECM-Harness-120mm	1	BE141620GEK0032	1	N/A	1	800036	8	N/A	0	31817	4
DU/DR10HFA	ECM-KIT-10-120V	1/8	M047PWAAE-ECM-60	1	EVO/ECM-VCU-36-MP	1	ECM-Harness-120mm	1	BE141620GEK0032	1	N/A	1	800036	8	N/A	0	31817	4
G10 DD HMUA	ECM-KIT-G10DD-HMUA-240V (-TEAO)	1	M055CUC0315-ECM-60 (BMN48-75011-60)	1	EVO/ECM-VCU-36-MP (ECM-VCU-RTC)	1	ECM-Harness-HMUA(-Telco)	1	BE241620GEK	1	G10DDMM	2	800036	8	800044	4	31817	6
D76 DD HMUA	ECM-KIT-D76DD-HMUA-240V (-TEAO)	1	M055CUC0315-ECM-60 (BMN48-75011-60)	1	EVO/ECM-VCU-36-MP (ECM-VCU-RTC)	1	ECM-Harness-HMUA(-Telco)	1	BE241620GEK	1	G7DDMM	2	800036	8	800044	4	31817	6
G10 DD	ECM-KIT-G10DD-240V (-TEAO)	1	M055CUC0315-ECM-60 (BMN48-75011-60)	1	EVO/ECM-VCU-36-MP (ECM-VCU-RTC)	1	ECM-Harness	1	BE241620GEK	1	G10DDMM	2	800036	8	800044	4	31817	6
DU/DR85HFA	ECM-KIT-85-240V (-TEAO)	3/4	M055CUL0316-ECM-60 (BMN48-56011-60)	1	EVO/ECM-VCU-36-MP (ECM-VCU-RTC)	1	ECM-Harness	1	BE241620GEK	1	F2090ECM	1	800036	8	N/A	0	31817	4
DU/DR50HFA	ECM-KIT-50-240V (-TEAO)	1/2	M055CUM0317-ECM-60 (BMN48-37511-60)	1	EVO/ECM-VCU-36-MP (ECM-VCU-RTC)	1	ECM-Harness	1	BE241620GEK	1	F2090ECM	1	800036	8	N/A	0	31817	4
DU/DR33HFA	ECM-KIT-33-240V (-TEAO)	1/3	M055CUN0318-ECM-60 (BMN48-25011-60)	1	EVO/ECM-VCU-36-MP (ECM-VCU-RTC)	1	ECM-Harness	1	BE241620GEK	1	F2090ECM	1	800036	8	N/A	0	31817	4
DU/DR12HFA	ECM-KIT-12-240V	1/4	M047PWAAD-ECM-60	1	EVO/ECM-VCU-36-MP	1	ECM-Harness-120mm	1	BE241620GEK	1	N/A	1	800036	8	N/A	0	31817	4
DU/DR10HFA	ECM-KIT-10-240V	1/8	M047PWAAE-ECM-60	1	EVO/ECM-VCU-36-MP	1	ECM-Harness-120mm	1	BE241620GEK	1	N/A	1	800036	8	N/A	0	31817	4

Parts in parenthesis are for TEAO EC motors.