

2013 OWNER'S MANUAL



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Receiving, Handling, and Storage

ALL UNITS MUST BE INSPECTED FOR ANY SIGN OF TAMPERING OR DAMAGE PRIOR TO ACCEPTING DELIVERY OF YOUR TURFBREEZE FAN. ANY DAMAGES MUST BE NOTED ON THE BILL OF LADING ALONG WITH THE SIGNATURE OF THE DRIVER MAKING THE DELIVERY. ONCE THE DELIVERY HAS BEEN ACCEPTED, ANY AND ALL LIABILITY IS TRANSFERRED FROM TURFBREEZE TO THE RECEIVING PARTY.

TurfBreeze fans are carefully inspected before leaving the factory, but all nuts, bolts, and fasteners should be checked prior to installation to ensure vibration during shipping has not caused any of them to become loose.

Care must be taken when transporting the fans from the receiving location to the desired storage or installation site. It is recommended that equipment featuring lifting forks be used to transport the entire crate and or pallet as it was shipped from TurfBreeze. If lifting fork equipment is not available for transporting the assembly as shipped, the components must be removed from the packaging and moved individually. Always be sure to use caution and your best judgment when lifting heavy objects. A lifting lug on the top of the fan housing has been provided for hoisting the fan and oscillating assembly during installation or transporting the fan and oscillating assembly to the installation site. This lifting point is only designed to support the combined weight of the fan and oscillating assembly. The fan pole and any other items that may be contributing additional weight should be disconnected and or removed before lifting the fan and oscillating assembly by the provided lifting lug. When transporting always be sure to add additional support straps to prevent potential damage due to excessive spinning, swinging, or other instability while underway. Care must be taken, NEVER DROP THE FAN. This will almost always cause the housing to become out of round which will negatively affect the performance in addition to potentially resulting in damage due to interference between the housing and the blades. If a fan is accidentally dropped always check the impeller (fan blade) tip clearance prior to powering the fan to ensure that there is no contact with the housing.

If the fans are to be stored for an extended period of time, such as over the winter, it is recommended that they be cleaned and coated with a rust inhibiting aerosol lubricant such as WD-40 prior to storing. The fans should be stored in a dry area shielded from the weather. If a protected storage area is not available TurfBreeze fan covers, custom tailored for each model fan, are available upon request by calling (866) 641-6663.

Installation

- 1. Install ground pole per the instructions on installation drawing on page 20. Note that the use of the valve box is recommended, but not required. Once the ground pole has been placed in the concrete and angled and leveled properly, allow the concrete to cure at least two weeks before continuing on to step two.
- Ground pole concrete must cure for a minimum of two weeks prior to installing the fan pole and fan.
 - 2. Install the fan pole after the ground pole installation has been allowed to cure two weeks. It is recommended that fan pole be oriented such that the control package and wiring are facing away from the green for a cleaner appearance from the area of play.
 - 3. Place the fan and oscillating assembly on top of the fan pole with the set bolts facing away from the green. Starting at the top, lightly tighten the (4) set bolts to square the oscillating assembly on the fan pole (see included Fan Component Diagram for general part locations and identification). Once each of the (4) set bolts are snug, finish tightening each bolt such that the fan doesn't spin when given a moderate push on side of the inlet bell. Be careful not to over tighten the bolts or they may strip or cause excessive deformation of the pole creating a weak area just below the oscillating assembly.
- Step 4) should be completed either prior to connecting to the power supply ,or with the power sufficiently locked out at the power source, and should only be performed by a qualified electrician.
 - 4. Disassemble the provided female power plug, route the power supply cable through the back shell of the plug, and terminate the individual stripped ends of the wires.

Start Up

- 1. Visually inspect inside the fan for any tools or foreign objects.
- 2. Bump the fan to check rotation by guickly switching power on and off.

Steps 3 & 4 should only be performed by qualified electricial personnel.

- 3. Start fan with amp meter attached (use inductive clamp on style meters). Fan should be at full speed and operating amps in 7 seconds. If it is not, shut down immediately or the motor will be damaged. If this situation occurs, record measured voltages and current (amps), fan motor nameplate voltage and phase, power supply voltage and phase, supply wire size, and length of supply wires. With a list of the above information call TurfBreeze for technical assistance. Toll-Free (866) 641-6663.
- 4. While operating, measure electrical voltage and amps at a safe location within 10 feet of the motor. The voltage should be within +/- 10% of nameplate rating on motor. If the operating voltage is out of this 10% range contact TurfBreeze for further instruction before continuing use as these voltages may cause irreparable damage to the motor and or electrical components.
- 5. Visually inspect oscillating system through a minimum of (2) two cycles to insure that it is operating correctly without interference to any of the linkage components.
- 6. Adjust rod end assembly position in the torque arm to fine tune green coverage. If more coverage is required, move the connection outward away from the gear motor's shaft. If coverage is still insufficient, move the rod end connection at the U-Bracket to the next hole closer to the center of the fan. Loosen the (4) set bolts and rotate entire assembly for overall coverage adjustment to the left or right. Re-tighten bolts per the instructions given in step 4 of the Installation section.

Service & Maintenance

General Fan Components

Electric Motors

All TurfBreeze motors are lubricated during assembly, and do not require any lubrication prior to initial use unless they are stored for an extended time prior to operation. Refer to the guidelines below for re-lubrication specifications.

Lubrication Intervals

- Seasonal Use*, All Motors
 - Re-lubricate annually just prior to operation
- Continuous Use, 1800 RPM Motor
 - Re-lubricate every 6,000 Hrs.
- Continuous Use, 1200 RPM Motors
 - Re-lubricate every 9,000 Hrs.

Recommended Lubricants

- Exxon Mobil Polyrex EM
- Shell Dolium R
- Chevron SR1 2

Amount to add (all motors) - 0.16 fluid ounces

<u>TIP</u> - Measure the fluid ounces of grease discharged per stroke from your grease gun, and then determine exactly how many strokes are required to get 0.16 fluid ounces. For example, if you measure 0.0624 fl.-oz. out of one full stroke then it will require (0.16/0.0624) = 2.6 strokes.

Oscillating Assemblies

The linkage components should be inspected for looseness and corrosion monthly during operation. If evidence of corrosion is detected then a topical coating of a corrosion inhibiting spray is recommended. Sprays or chemicals that dry to a film or waxy finish are preferred as they collect less airborne dust and debris.

The main oscillating hub should be greased annually by removing the center cap, and simply topping off the inner bearing compartment with common wheel bearing grease. Note that it is not recommended that grease be injected under pressure, or through a grease fitting.

Wiring and Controls

Operational vibration, and thermal cycling can cause wires to rub through in places, and terminal connection to become loose. Wire terminals, circuit components, and wire insulation should be inspected initially at startup, and then annually after that. During inspection check for any signs of wire or component discoloration due to heat, melting, arcing, smoke, etc.

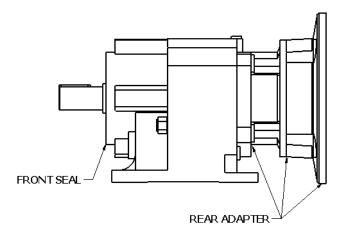
TB-30 & TB-36 Direct Drive Fans

There are no special maintenance requirements for the TB-30, and TB-36 fans in addition to the items discussed in the General Fan Components section above.

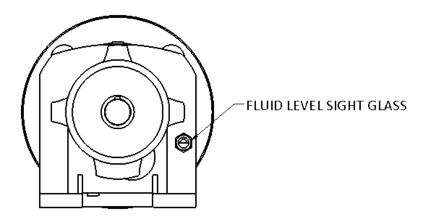
^{*} Both used and new motors left idle for 6 months or more should be lubricated before use.

TB-50 Gear Drive Fans

- 1) All fans are fully tested prior to shipping and will arrive filled with the correct amount of fully synthetic gear oil ready for operation. There is no initial, or post break-in servicing required. Mechanics will find this unusual, as post break-in fluid changes are the norm with most equipment, however due to the quality and precision of the gearbox components used it is recommended that the lubricant **NOT** be changed prior to 20,000 hours of operation. Premature servicing unnecessarily increases the risk of debris ingress and fluid contamination.
- Periodically inspect the bottom of the front seal and rear adapter areas of the gearbox for signs of oil leakage.



3) Periodically inspect the fluid level using the sight glass on the front of the gearbox.



- 4) If the fluid must be added it is recommended to completely drain the gearbox, and refill using exactly 0.95 quarts (0.90 liters) of Mobil SHC Cibus 220 (or exact equivalent) to avoid overfilling. Both overfilling and under filling will result in gearbox failure.
- 5) With the exception of the case of low fluid replacement discussed above, it is recommended that the fluid **NOT** be changed prior to 20,000 hours of operation for optimum service life.

TB-50 Premium

Belt Tensioning

The proper tension for operating a V-belt drive is the lowest tension at which the belts will not slip at peak load conditions. Belts are adjusted by raising or lowering the motor pivot plate (see Figure 11 for details). For tensioning, the proper belt deflection half-way between sheave centers is 1/64 of the belt span. For TurfBreeze Premium fans the belt deflection should be between 1/4" and 1/2" using with 5 pounds pressure applied at the mid-point of the free belt span (deflection and mid-point depicted in Figure 10a, on page 16).

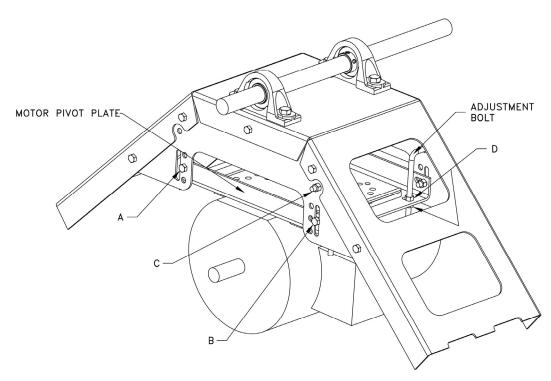
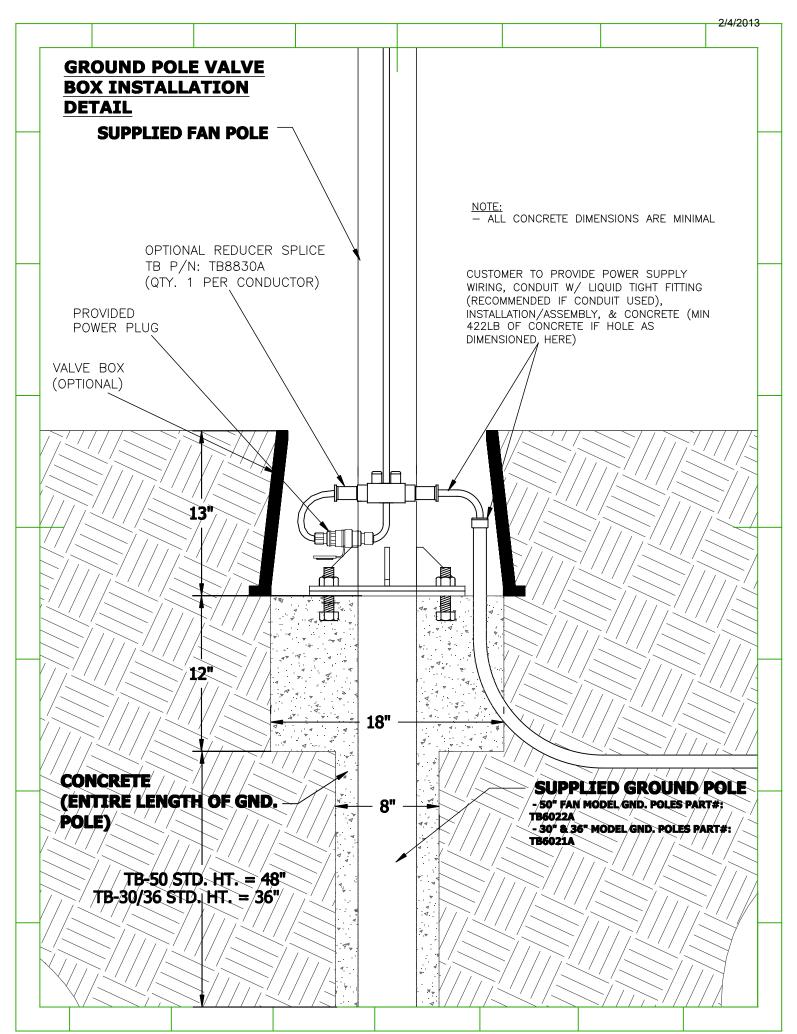


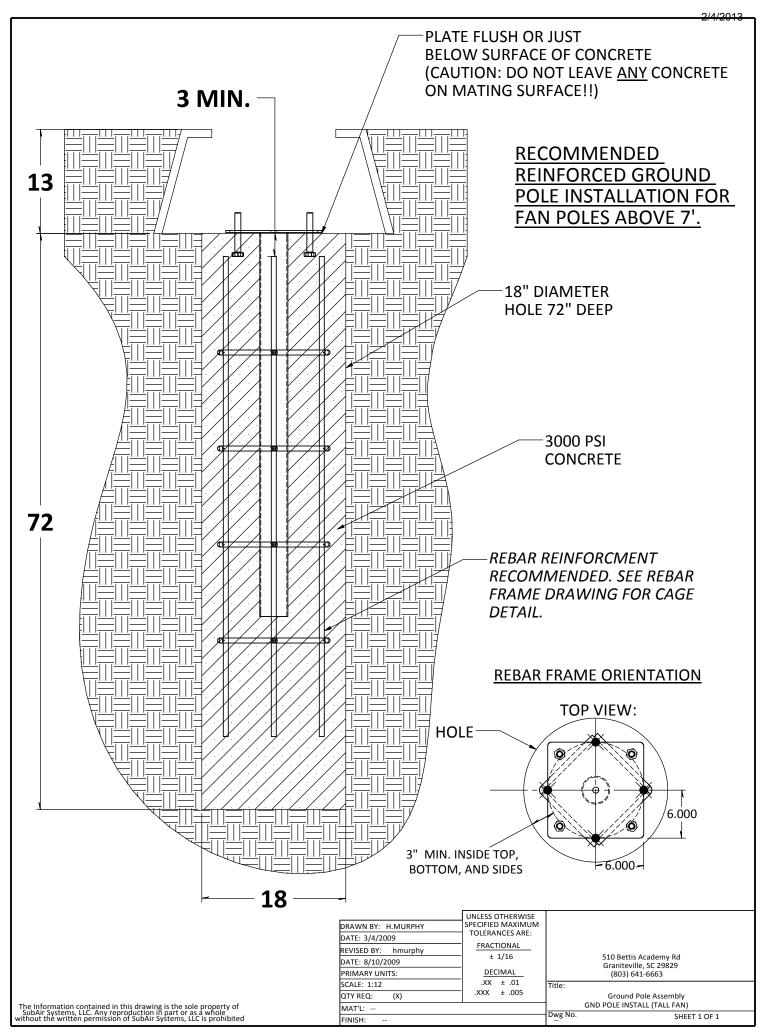
Figure 1: TurfBreeze Premium Fan V-Belt Tensioning adjustment points

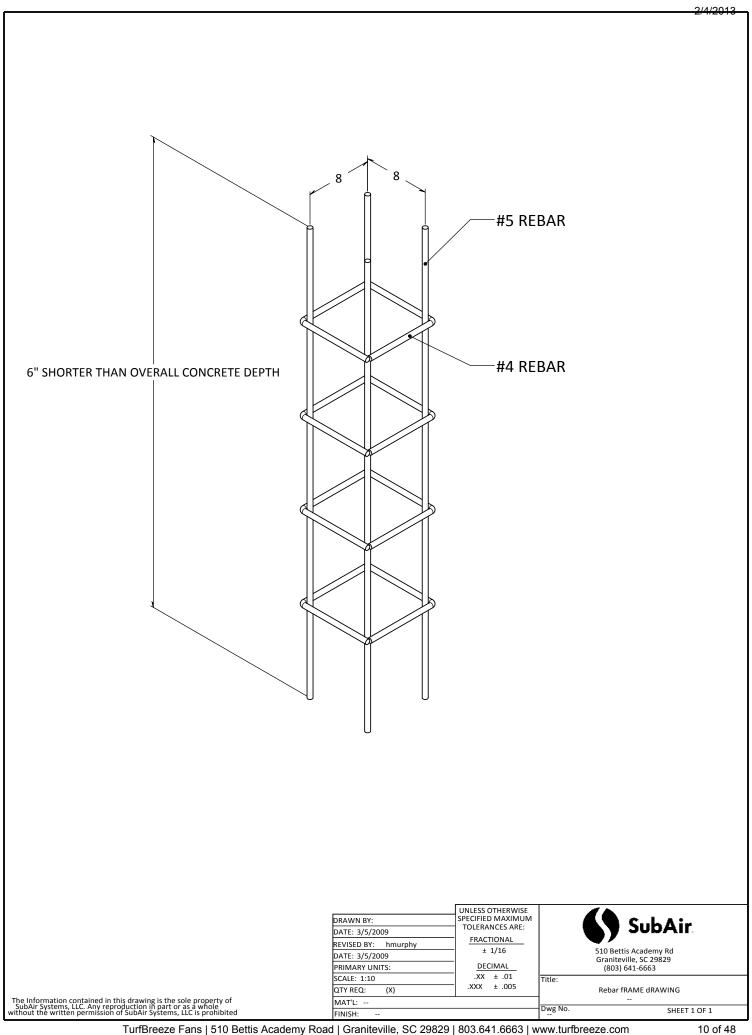
Motor pivot plate adjustment (belt tensioning) procedure:

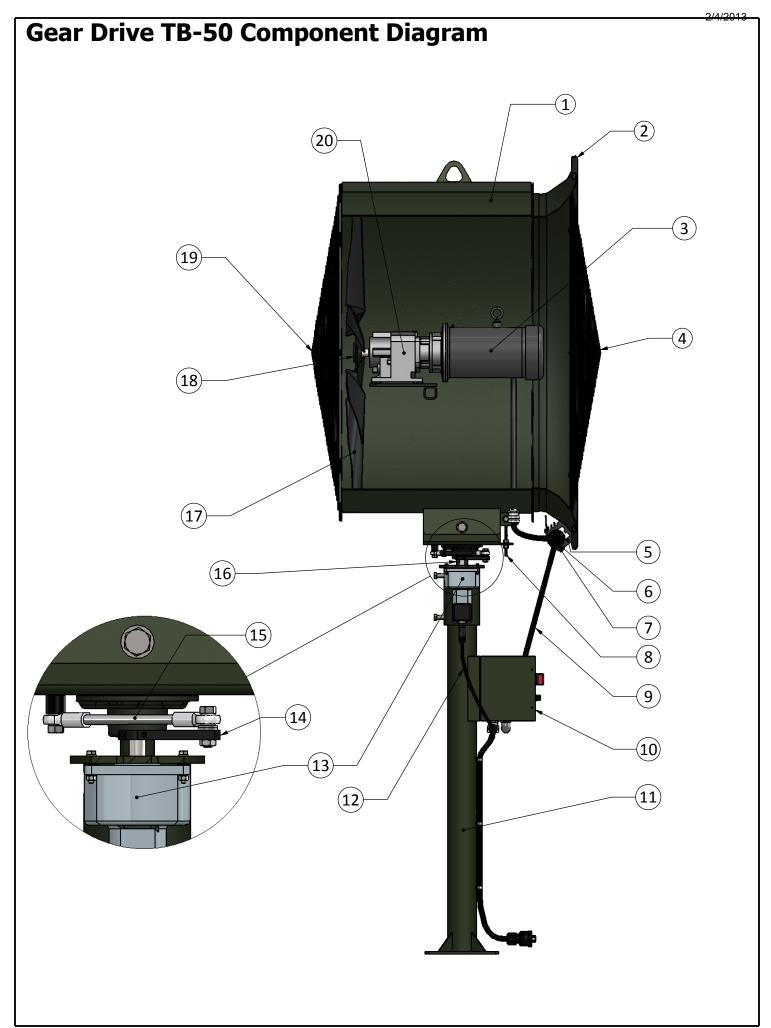
Follow the following steps:

- 1. Loosen fasteners A, B, & C on both sides of the drive frame.
- 2. Loosen and adjust jam nuts (D) on both adjustment bolts equally until proper belt tension has been obtained.
- 3. Tighten jam nuts (D).
- 4. Tighten fasteners A, B, & C on both sides of drive frame.





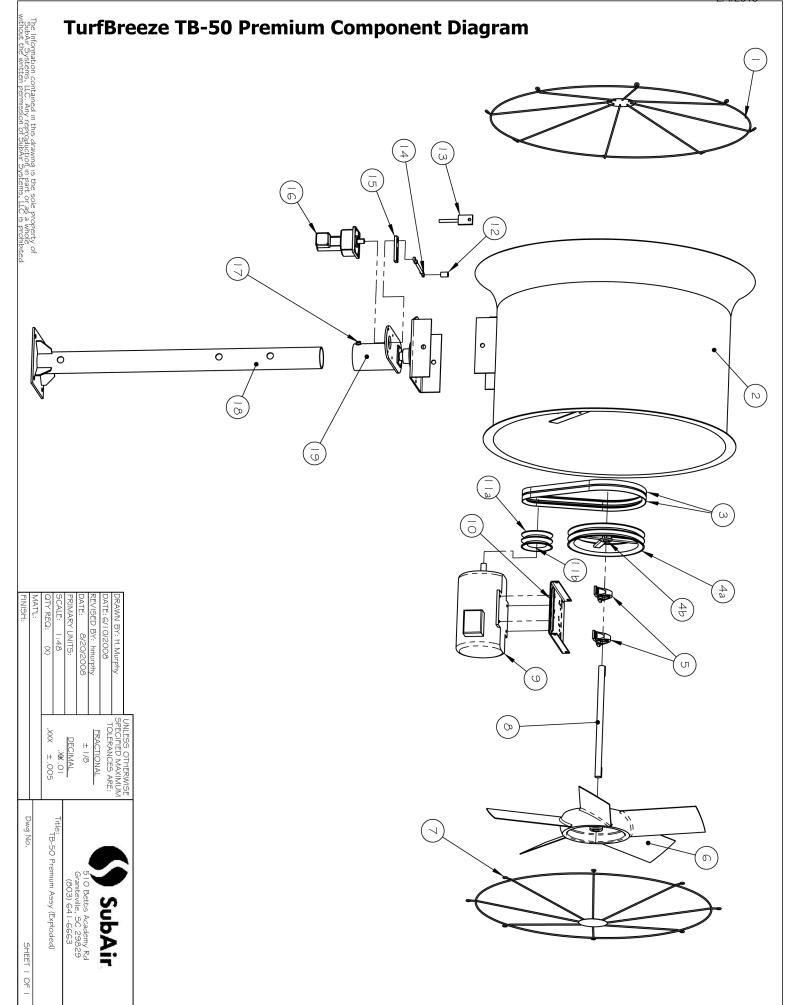




Turf Breeze, LLC Parts List for TB-50-5 Gear Drive Fans (Prewired Preassembled)

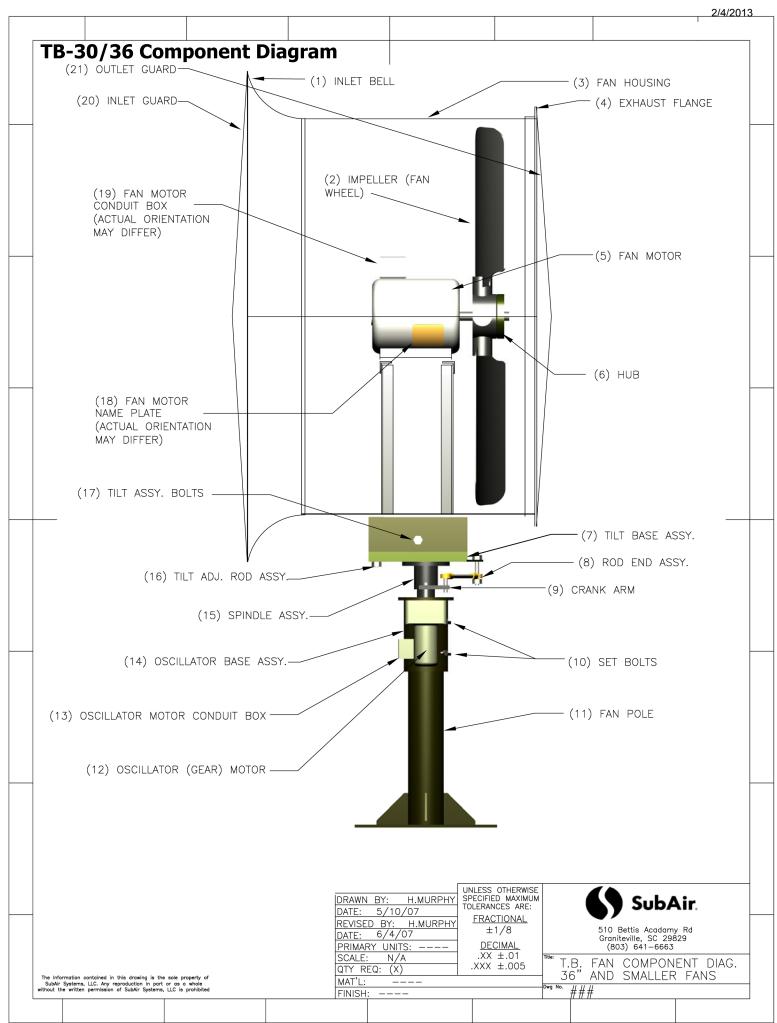
Item #	Part #	Description	Qty Required
1	TB7150C	Fan Housing (Includes Inlet Bell, Guards, & Adj./Tilt Rods)	1.00
2	TB8011B	<u> </u>	1.00
3	Fan Motor		1.00
· ·		5 HP 230/460 Volt 3Ø	
		5 HP 208/230 Volt 1Ø	
4	TB8015B	Inlet Guard	1.00
5	TB8835A	Power Plug Holder	1.00
6	Main Power Cable Male Plug		2.00
	TB8805	Main Power Cable Male Plug, 5 Hp 1Ø	
	TB8803	Main Power Cable Male Plug, 5 Hp 230/3Ø	
	TB8801	Main Power Cable Male Plug, 5 Hp 460/3Ø	
7		er Cable Female Plug	2.00
	TB8806	Main Power Cable Female Plug, 5 Hp 1Ø	
	TB8804	Main Power Cable Female Plug, 5 Hp 230/3Ø	
	TB8802	Main Power Cable Female Plug, 5 Hp 460/3Ø	
8	TB8121B	Tilt Rod	1.00
9	Main Pow	er Cable	Qty. Based On
	TB8815	Main Power Cable, 5 Hp 1Ø	Fan Pole Height
	TB8819	Main Power Cable, 5 Hp 3Ø	
10	Control Pa	ackage	1.00
	TB9235C		
	TB9255C	5 Hp, 3Ø, 208-230v	
	TB9265B	5 Hp, 3Ø, 460v	
11	Fan Pole		1.00
	TB6003C	3 Foot	
	TB6004C	4 Foot	
	TB6005C	5 Foot	
	TB6006C	6 Foot	
	TB6007C	7 Foot	
	TB6008C	8 Foot	
12	Oscillator	Power Wire	Qty. Based On
	TB8817	208-230, 1Ø/3Ø	Fan Pole Height
	TB8822	460, 3Ø	
13	Oscillator	Motor	1.00
	TB8631C	1Ø, 208-230v	
	TB8631C	3Ø, 208-230v	
	TB8632C	3Ø, 460v	
14		Crank Arm	1.00
15		Rod End Assembly	1.00
16	TB8524B	Oscillator Hub/Spindle	1.00
17	TB8203B	TB-50 Impellar (Fan Wheel)	1.00
18	TB8511B	TB-50 Impellar Bushing	1.00
19	TB8019B	Outlet Guard	1.00
20	TB8570A	Gear Box Assembly	1.00
	TB6030C	Ground Pole Assembly (Not Shown)	1.00

^{*} Quantities are included in item #1, and are shown again or reference only.



Turf Breeze, LLC Parts List for TB50 Premium Electric Fan

Item #	Part #	Description	Qty Required
1	TB8015P	Inlet Guard	1
2	TB8003P	Fan Housing	1
3		Belts	2
	TB8501P	Belt; 3 Hp Models	
	TB8499P	Belt; 5 Hp Models	
	TB8507P	Belt; 7.5 Hp Models	
4a		Shaft Pulley	1
	TB8540P	Shaft Pulley; 3 Hp Models	
	TB8516P	Shaft Pulley; 5 Hp Models	
	TB8516P	Shaft Pulley; 7.5 Hp Models	
4b		Shaft Pulley Bushing	1
	TB8508P	Shaft Pulley Bushing; 3 Hp Models	
	TB8508P	Shaft Pulley Bushing; 5 Hp Models	
	TB8508P	Shaft Pulley Bushing; 7.5 Hp Models	
5		Pillow Block Bearing	2
6	TB8022P	Impeller (Fan Wheel) Hub Bushing	1
7	TB8019P	Outlet Guard	1
8	TB8522P	Impeller Shaft	1
9		Fan Motor	1
	TB8618P	3 HP 208-2301Ø	
	TB8613P	3 HP 208-230/460 Volt 3Ø	
	TB8604P	5 HP 208-2301Ø	
	TB8606P	5 HP 208-230/460 Volt 3Ø	
		7.5 HP 208-2301Ø	
	+	7.5 HP 208-230/460 Volt 3Ø	
10	TB8024P	Motor Plate	1
11a		Fan Motor Pulley	1
		Motor Pulley, 3 Hp Models	
		Motor Pulley, 5 Hp Models	
	TB8521P	Motor Pulley, 7.5 Hp Models	
11b		Fan Motor Pulley Bushing	1
		Motor Pulley Bushing, 3 Hp Models	
		Motor Pulley Bushing, 5 Hp Models	
	ГВ8507Р	Motor Pulley Bushing, 7.5 Hp Models	
12	-	Rod End Assy Spacer Bushing (Part of Osc Assy)	1
13		Tilt Adjustment Rod Assy (Part of Osc Assy)	1
14		Rod End Assy (Part of Osc Assy)	1
15		Crank Arm (Part of Osc Assy)	1
16		Oscillating (Gear) Motor (Part of Osc Assy)	1
17		Set Bolts (Part of Osc Assy)	4
18	TB6001A		1
19		Oscillator Assy Ground Pole (Not Shown)	1
l	100022A	Ground Pole (Not Shown)	1

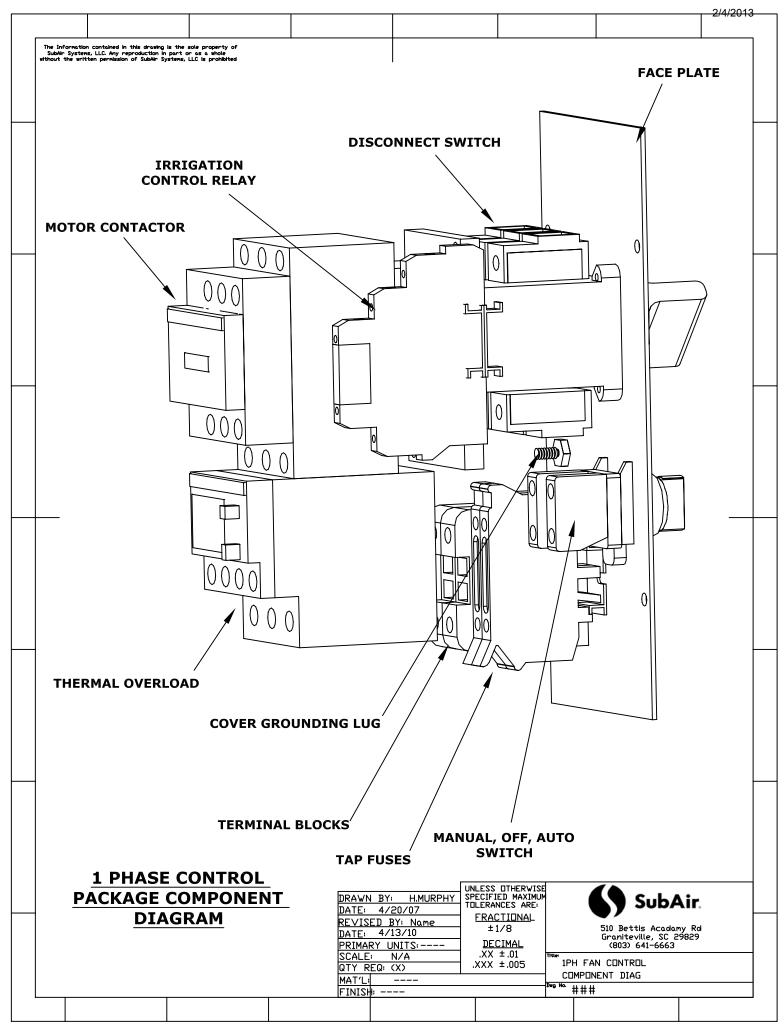


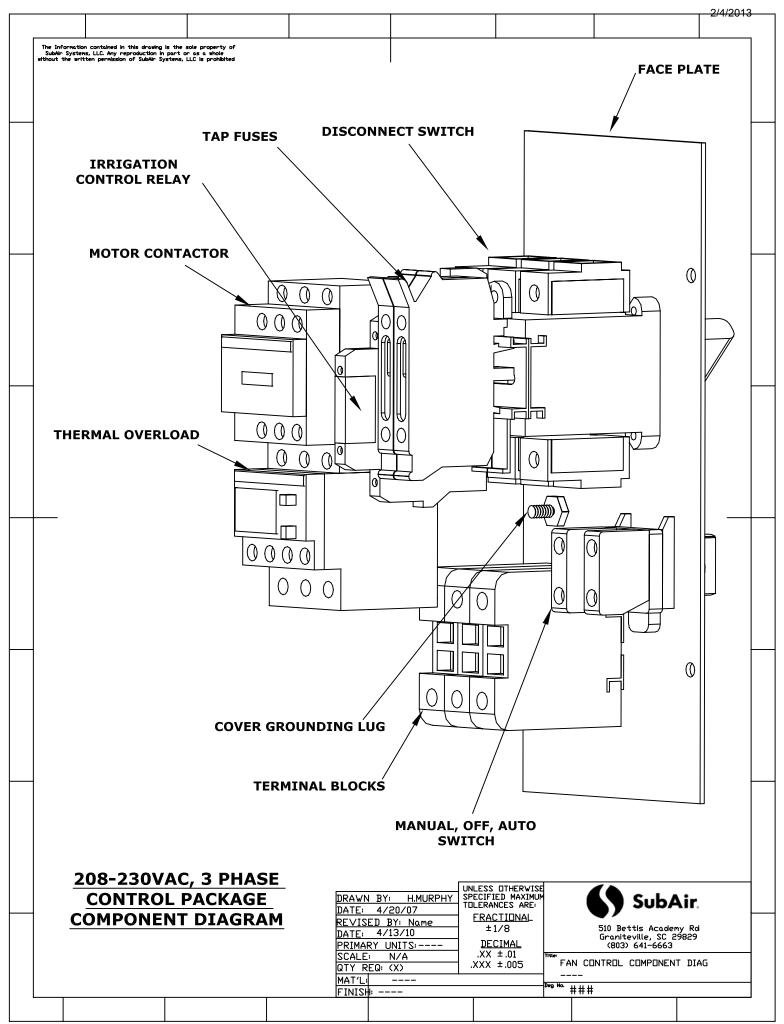
Turf Breeze, LLC Parts List for TB36 Electric Fan

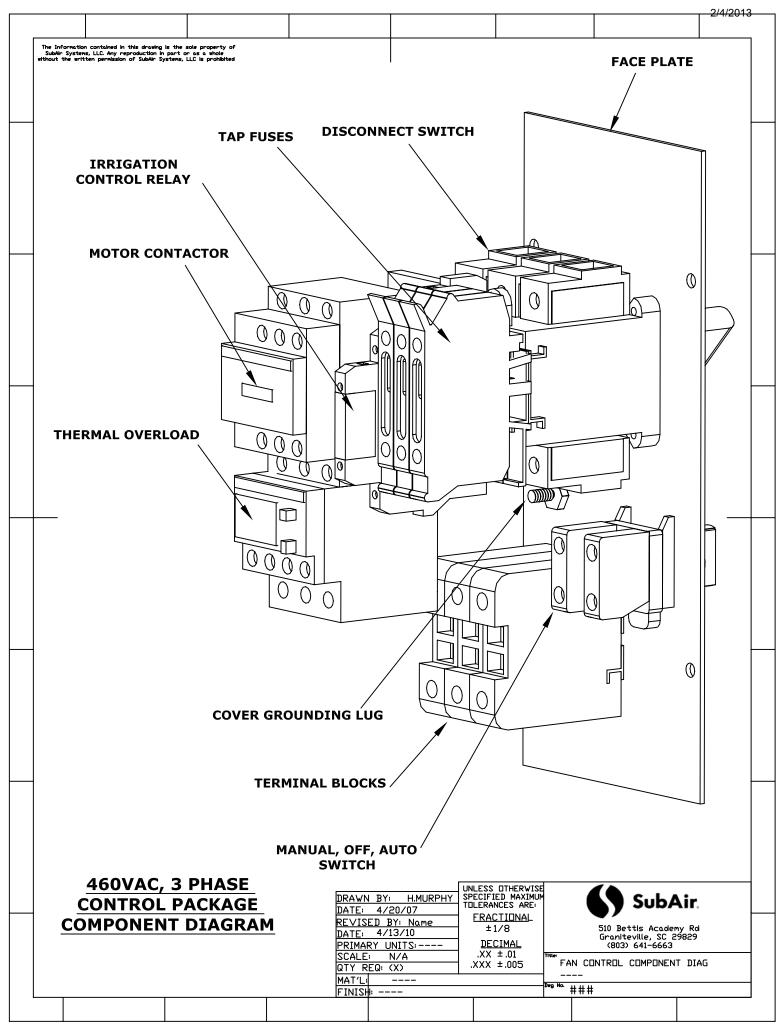
Item #	Part #	Description	Qty Required
1	TB8010A	Inlet Bell	1.00
2	TB8212A	Impeller (Fan Wheel)	1.00
3	TB8002A	Fan Housings	1.00
4	TB8006A	Exhaust Flange	1.00
5		Fan Motor	1.00
	TB8605A	2 HP 230 Volt 1Ø	1
	TB8607A	3 HP 230 Volt 1Ø	1
	TB8612A	2 HP 230/460V 3Ø	1
	TB8613A	3 HP 230/460v 3Ø	1
6		Hub (Part of Wheel Assy)	-
7		Tilt Base Assy	1.00
8	TB7560A	Rod End Assembly	1.00
9	TB8582A	Crank Arm (Part of Osc Assy)	1.00
10		Set Bolts (Part of Osc Assy)	2.00
11	TB6000A	Fan Pole	1.00
12	TB8602A	Oscillator (Gear) Motor	1.00
13		Oscillator Motor Conduit Box (Part of Motor)	-
14	TB8523A	Oscillator Base Assy	1.00
15		Spindle Assy (Part of Osc Assy)	1.00
16		Tilt Adjustment Rod Assy (Part of Osc Assy)	1.00
17		Tilt Assy Bolts (Part of Osc Assy)	2.00
18		Fan Motor Name Plate (Part of Motor)	-
19		Fan Motor Conduit Box (Part of Motor)	-
20	TB8014A	Inlet Guard	1.00
21	TB8018A	Outlet Guard	1.00
	TB6021A	Ground Pole (Not Shown)	1.00

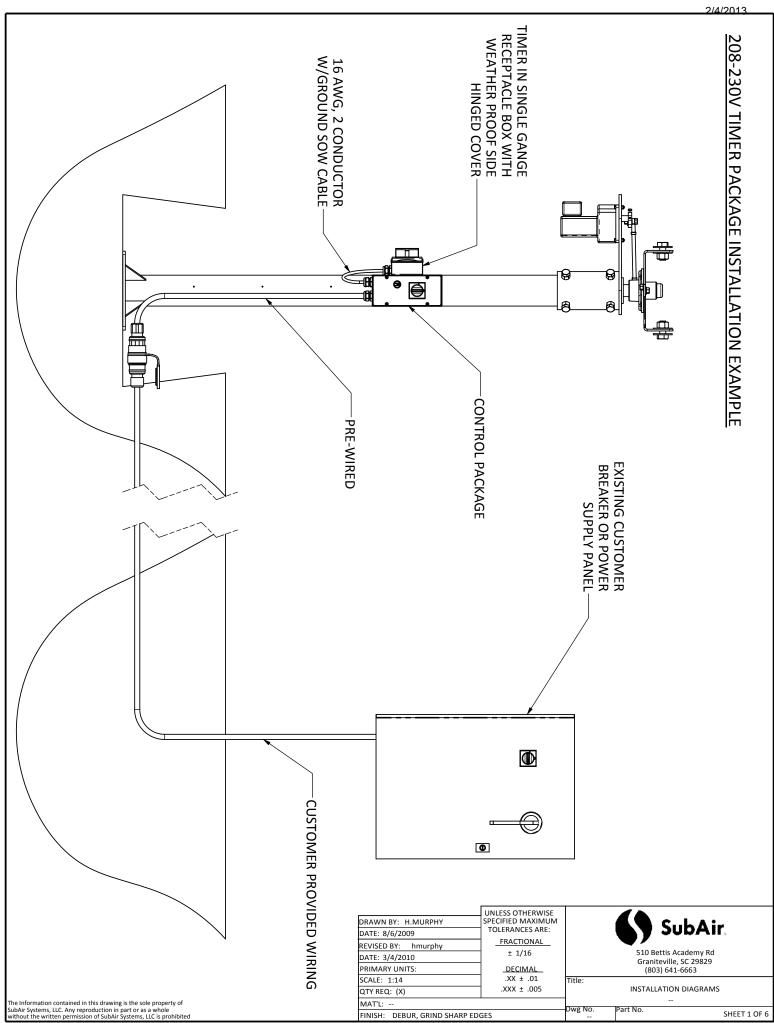
Turf Breeze, LLC Parts List for TB30 Electric Fan

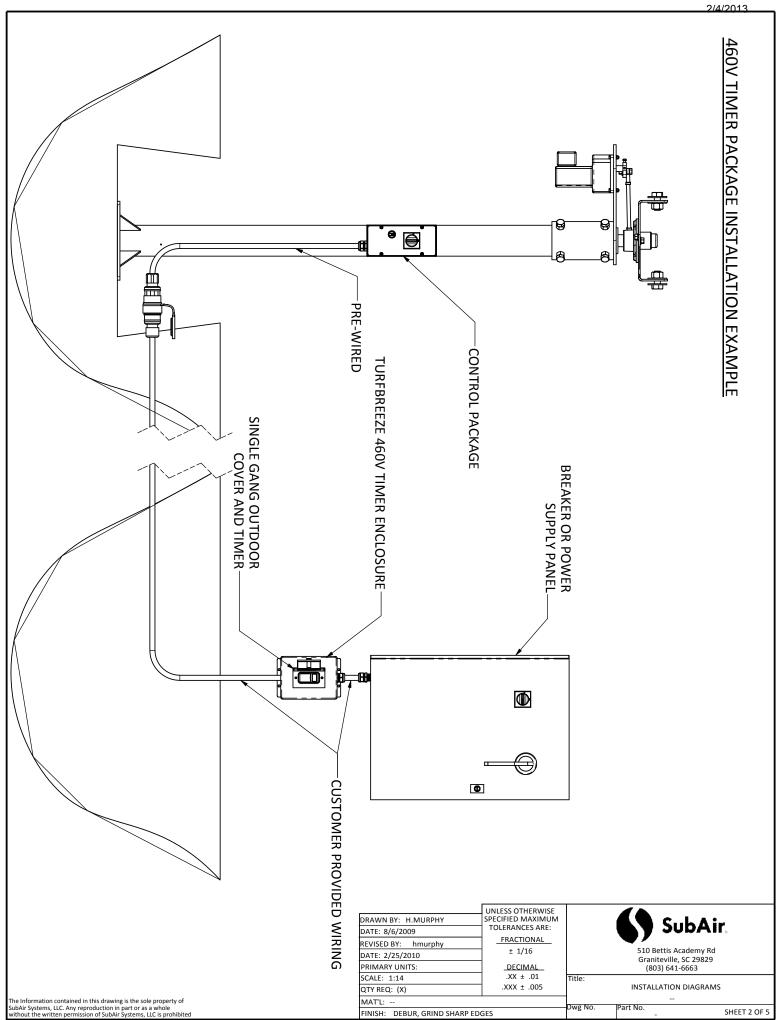
Item #	Part #	Description	Qty Required
1	TB8009A	Inlet Bell	1.00
2		Impeller (Fan Wheel)	1.00
		2 Hp Wheel	
	TB8211A	3 Hp Wheel	
3		Fan Housing	1.00
		Fan Housings, 30"- 2hp	
		Fan Housings, 30"-3hp	
4	TB8005A	Exhaust Flange	1.00
5		Fan Motor	1.00
	TB8605A	2 HP 230 Volt 1Ø	
	TB8607A	3 HP 230 Volt 1Ø	
	TB8612A	2 HP 230/460V 3Ø	7
	TB8613A	3 HP 230/460v 3Ø	7
6		Hub (Part of Wheel Assy)	-
7		Tilt Base Assy	1.00
8	TB7560A	Rod End Assembly	1.00
9		Crank Arm (Part of Osc Assy)	1.00
10		Set Bolts (Part of Osc Assy)	2.00
11	TB6000A		1.00
12	TB8602A	Oscillator (Gear) Motor (Baldor Model)	1.00
13		Oscillator Motor Conduit Box (Part of Motor)	-
14	TB7438A	Oscillator Base Assy	1.00
15		Spindle Assy (Part of Osc Assy)	1.00
16		Tilt Adjustment Rod Assy (Part of Osc Assy)	1.00
17		Tilt Assy Bolts (Part of Osc Assy)	2.00
18		Fan Motor Name Plate (Part of Motor)	-
19		Fan Motor Conduit Box (Part of Motor)	-
20	TB8013A	Inlet Guard	1.00
21		Outlet Guard	1.00
	TB6021A	Fixed Ground Pole (Not Shown)	1.00

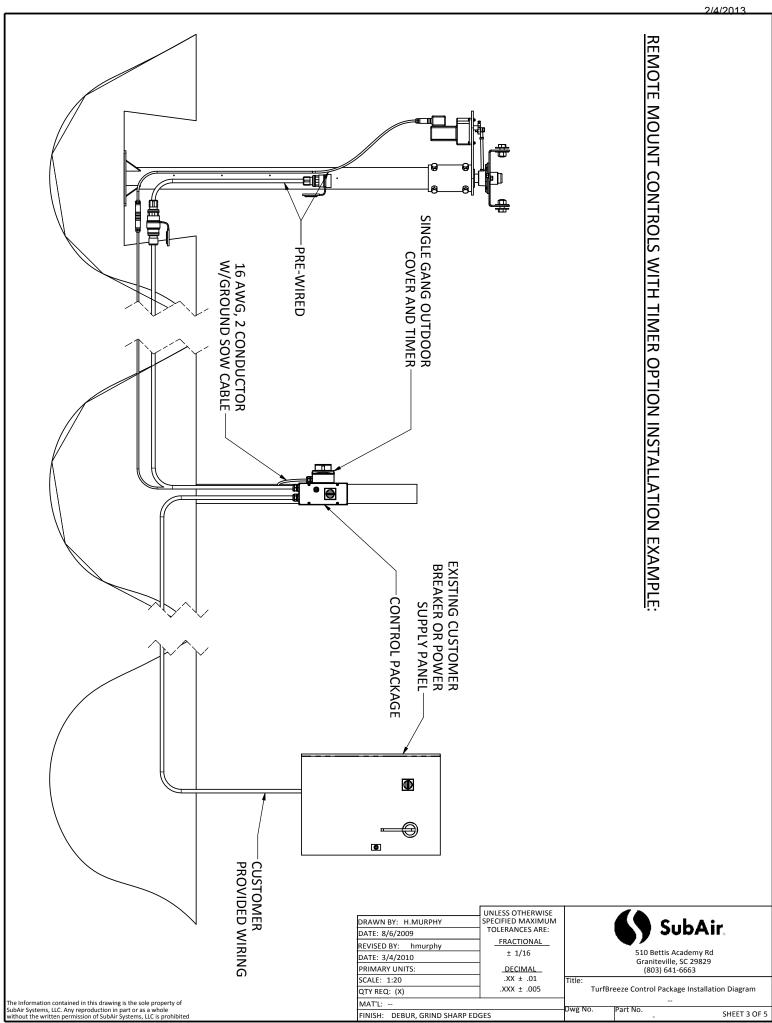


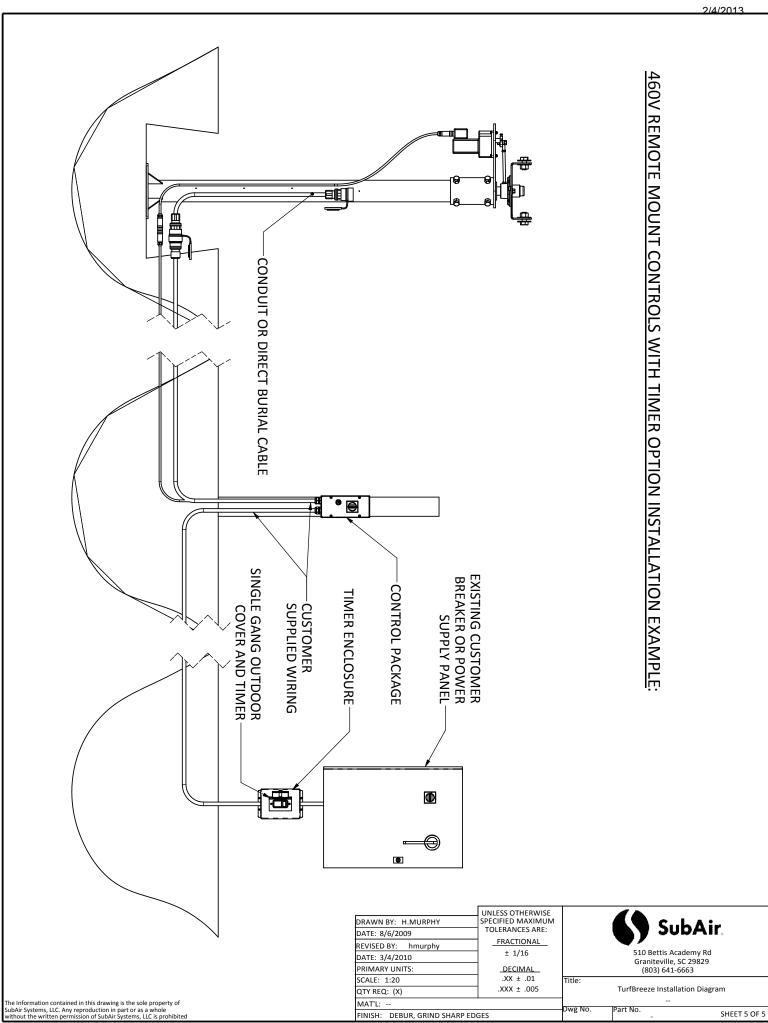


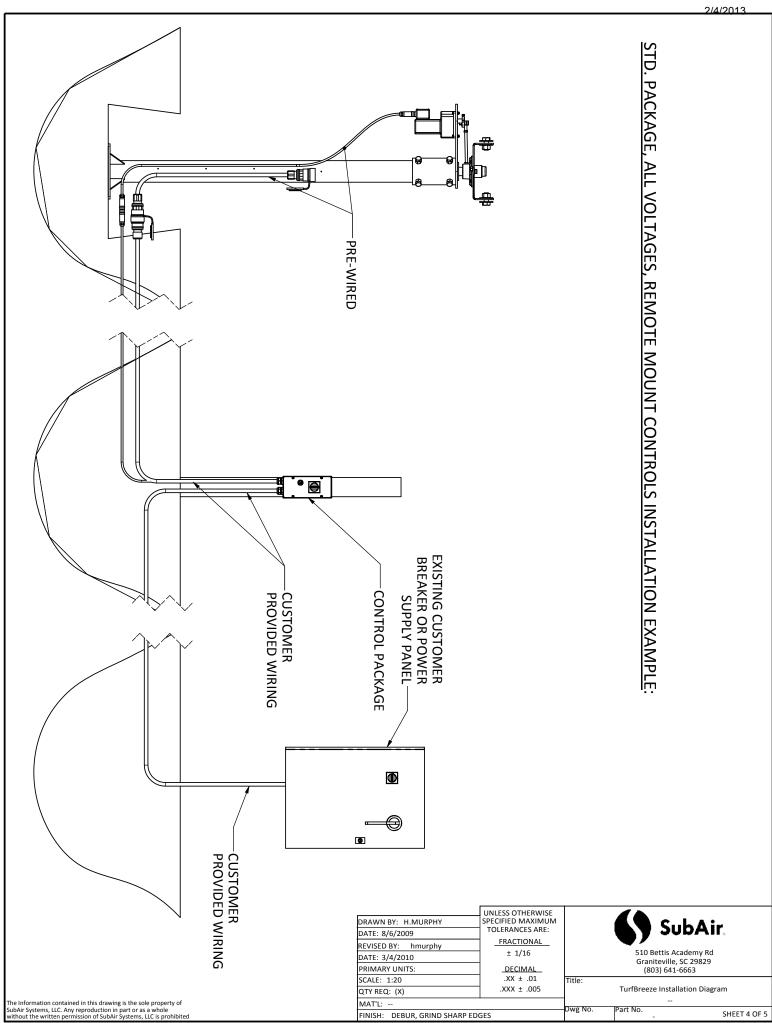






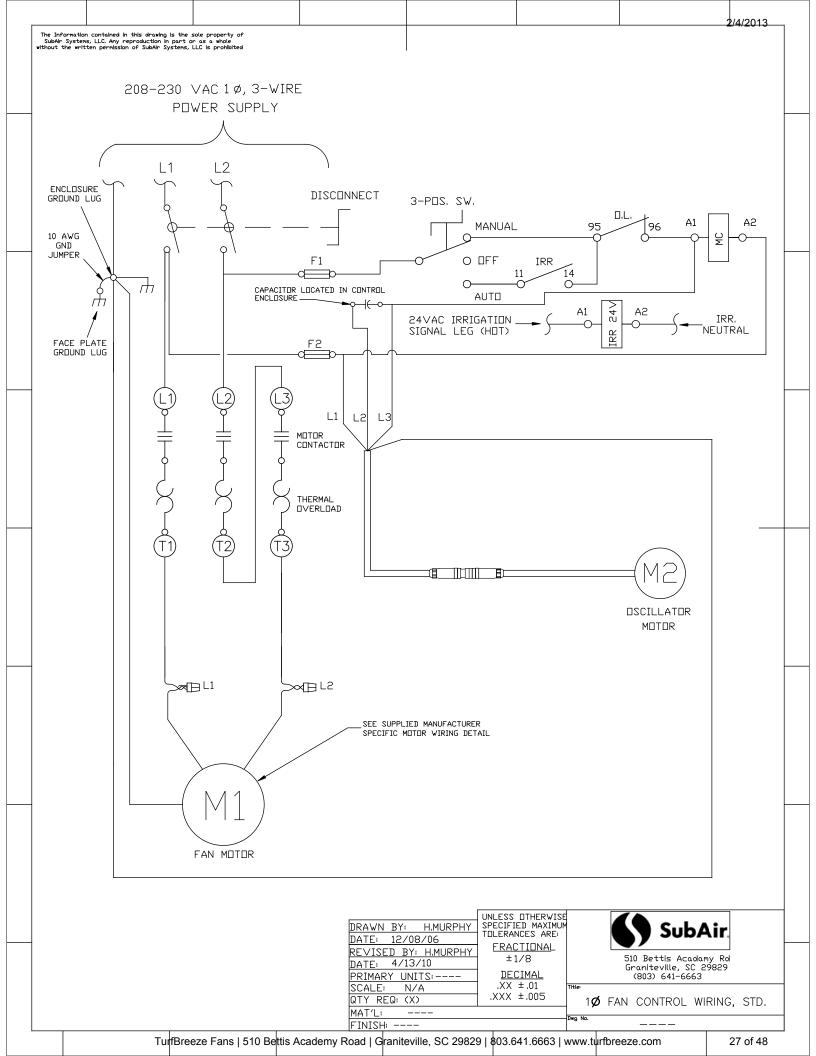


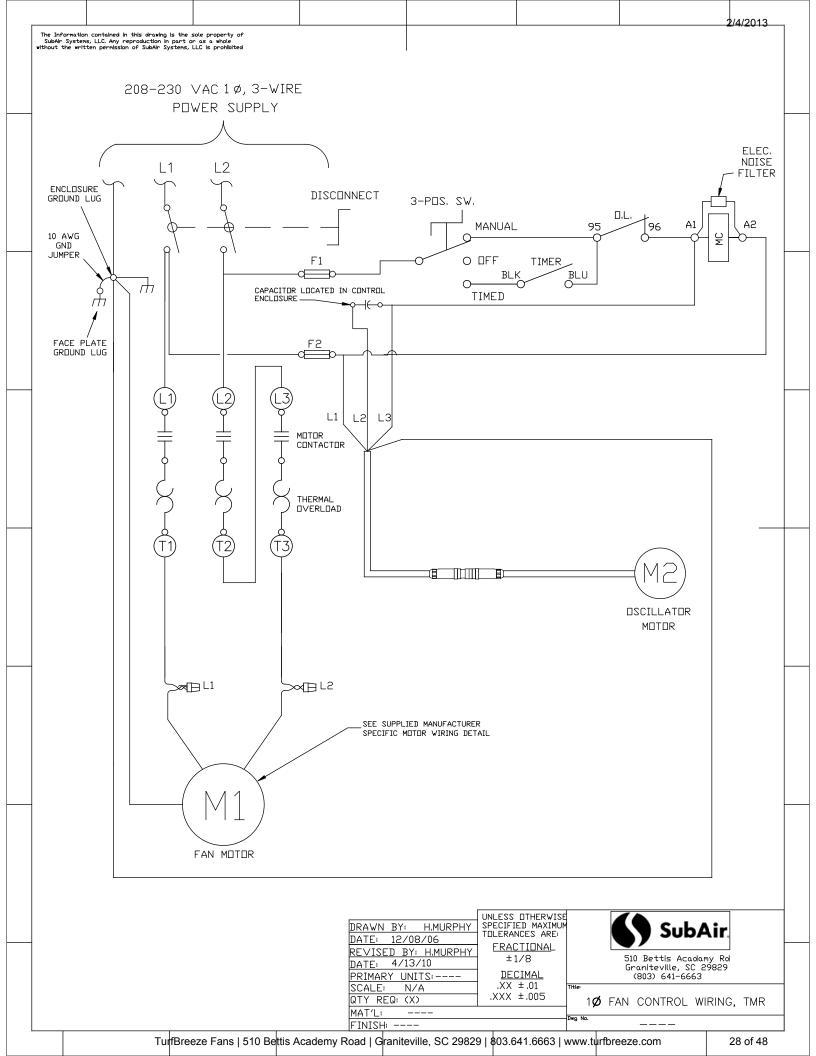


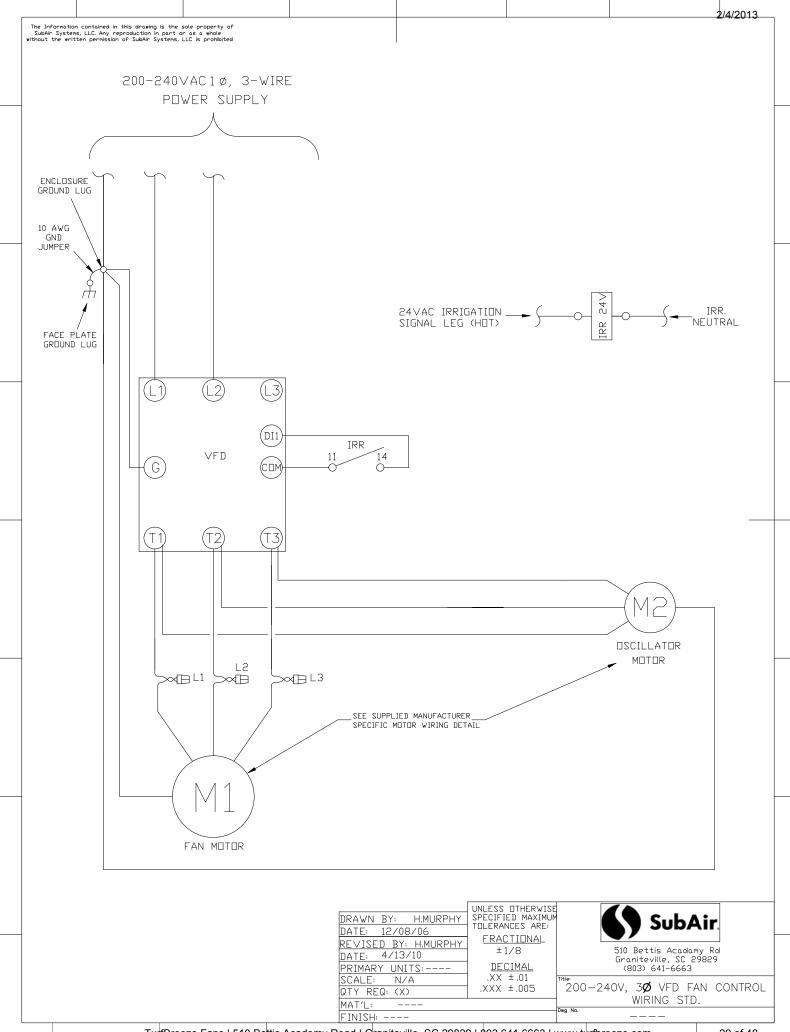


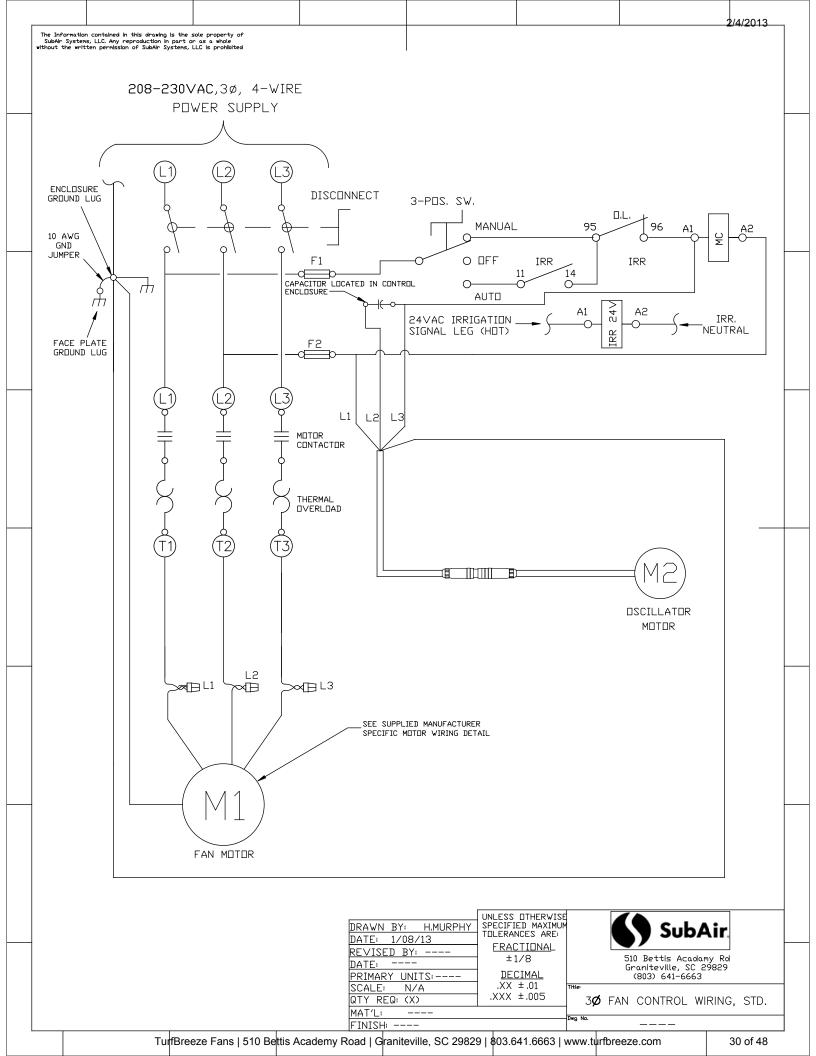


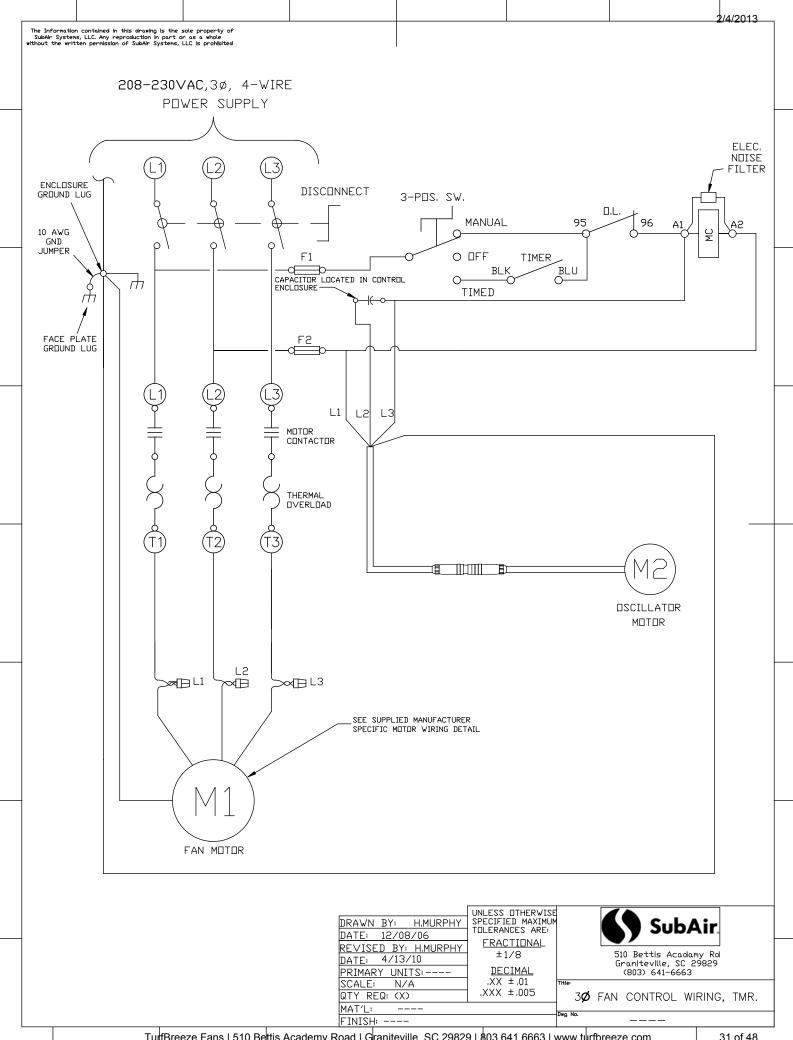
Electrical Schematics Bundle

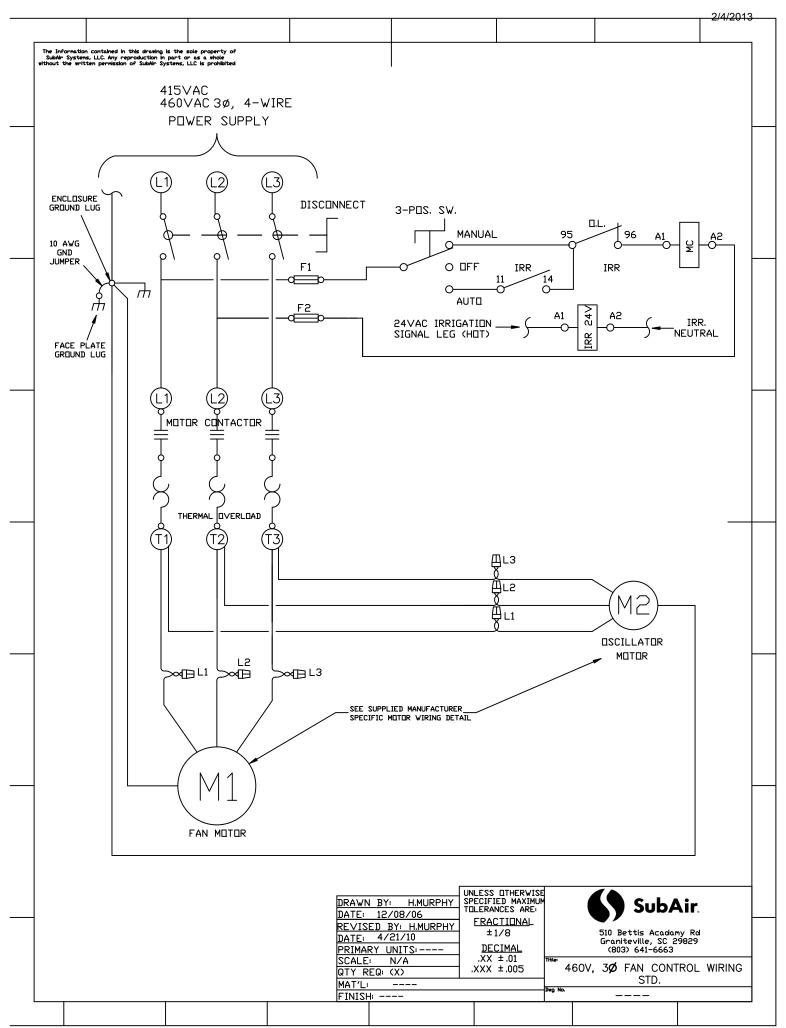


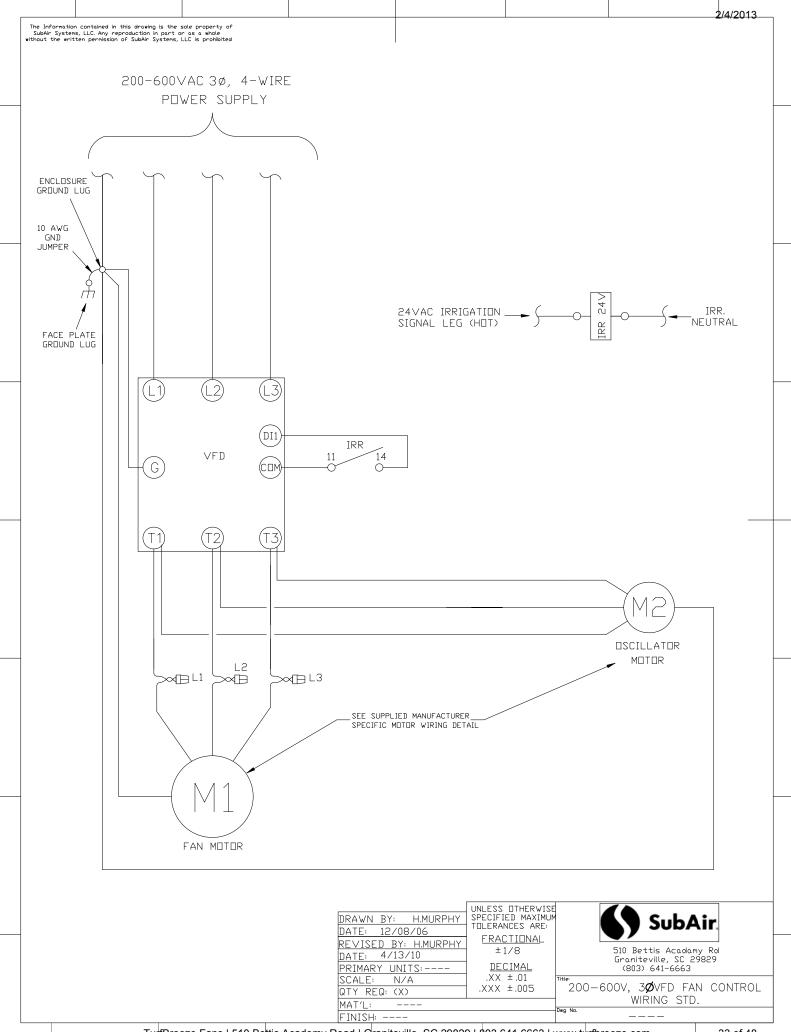


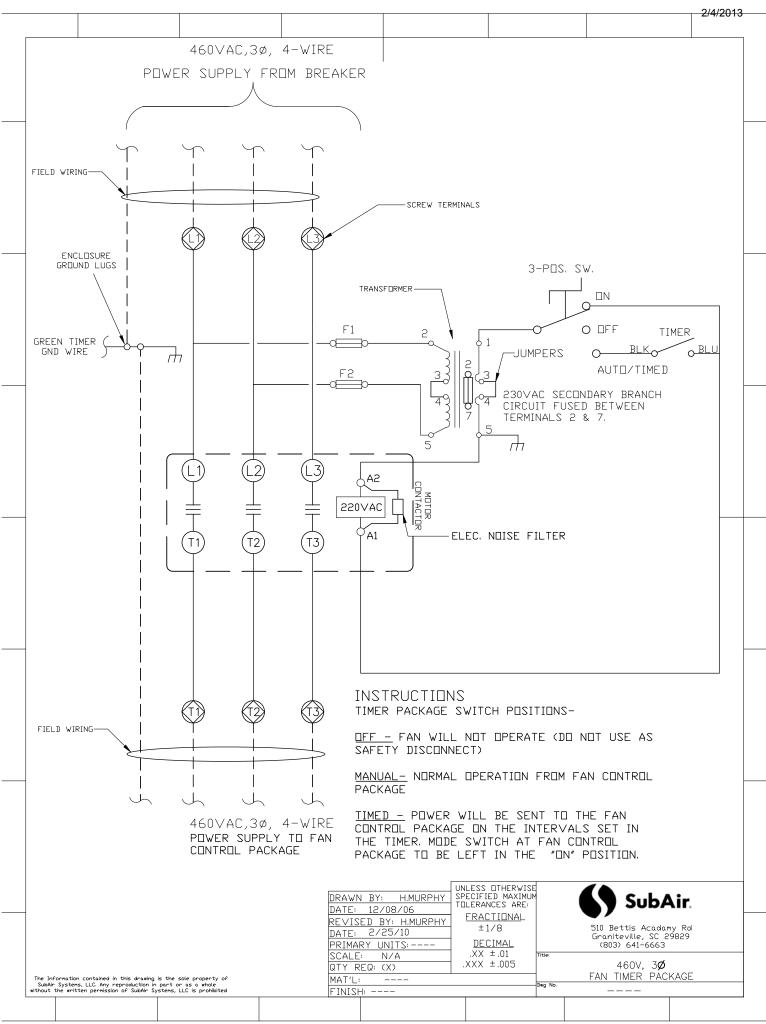






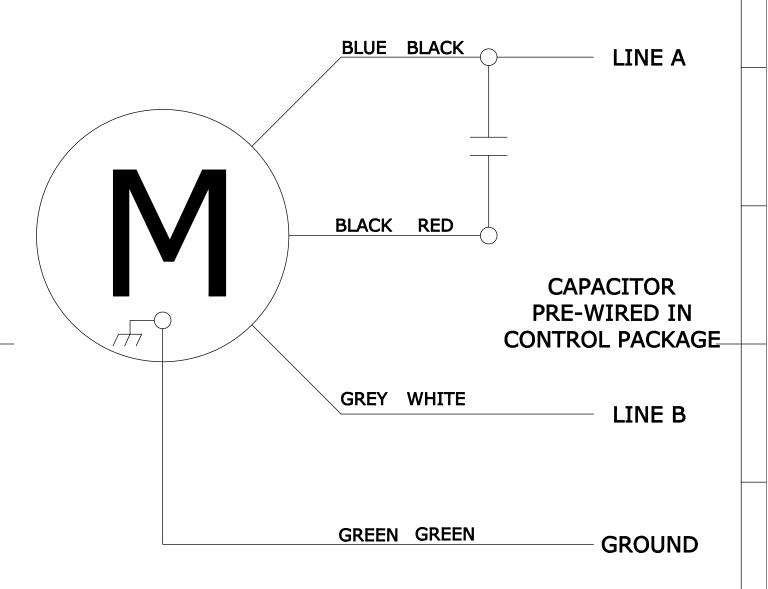






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BROTHER GEAR MOTOR 115VAC, $1/\!\!\!/$



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DATE: 6/05/07
REVISED BY: H.MURPHY
DATE: 6/28/07
PRIMARY UNITS:--SCALE: N/A
QTY REQ: (X)
MAT'L: ----



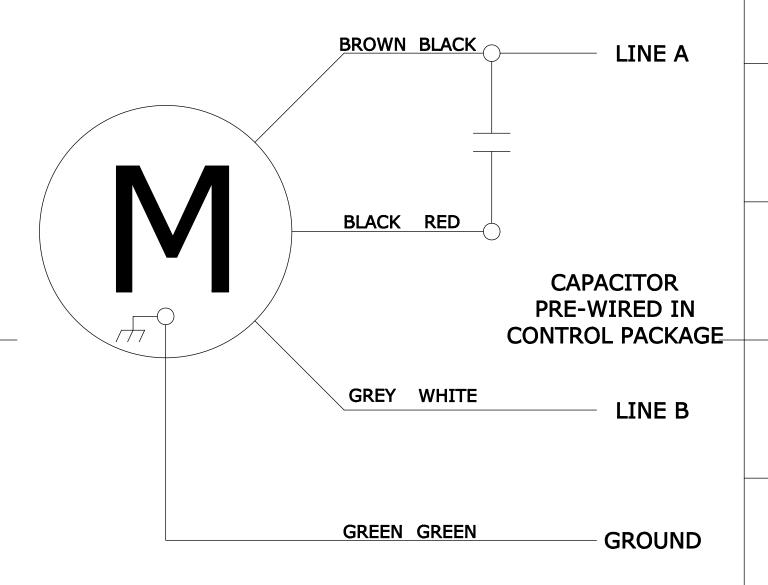
510 Bettis Acadamy Rd Graniteville, SC 29829 (803) 641-6663

BROTHER GEAR MOTOR WIRING

--Dwg No. ###

FINISH:----

BROTHER GEAR MOTOR 208-230VAC, $1\emptyset$ & $3\emptyset$



DRAWN BY: H.MURPHY
DATE: 6/05/07
REVISED BY: H.MURPHY
DATE: 6/28/07
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MAT'L: ----

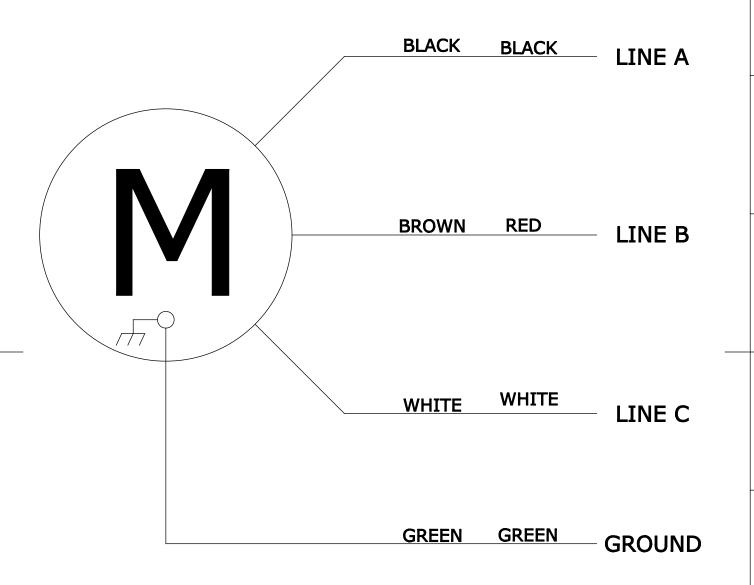


510 Bettis Acadamy Rd Graniteville, SC 29829 (803) 641-6663

BROTHER GEAR MOTOR WIRING

FINISH:----

BROTHER GEAR MOTOR 460VAC, 3/2



DRAWN BY: H.MURPHY
DATE: 6/05/07
REVISED BY: H.MURPHY
DATE: 6/28/07
PRIMARY UNITS:--SCALE: N/A
QTY REQ: (X)

UNLESS OTHERWISE
SPECIFIED MAXIMUM
TOLERANCES ARE:
FRACTIONAL
±1/8
DECIMAL
.XX ±.01
.XXX ±.015



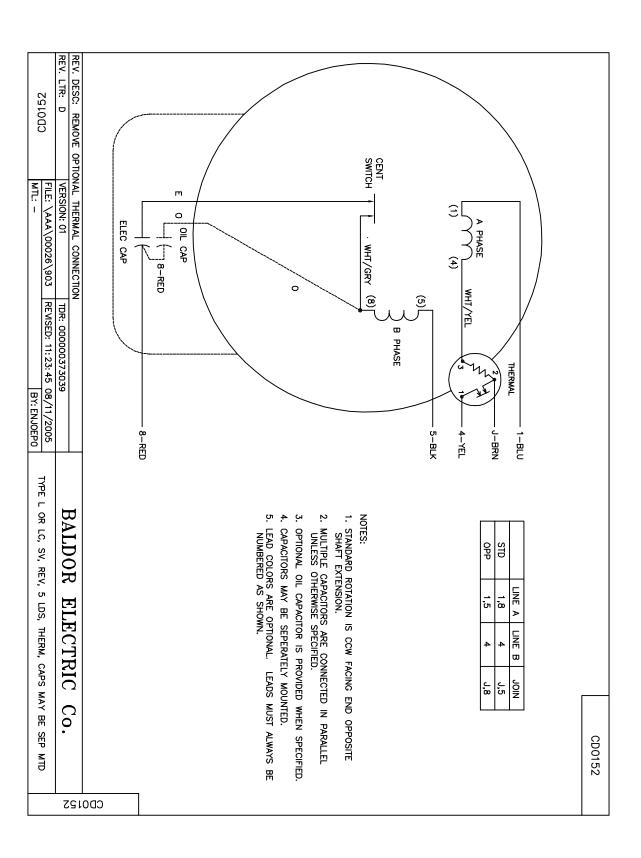
510 Bettis Acadamy Rd Graniteville, SC 29829 (803) 641-6663

BROTHER GEAR MOTOR WIRING

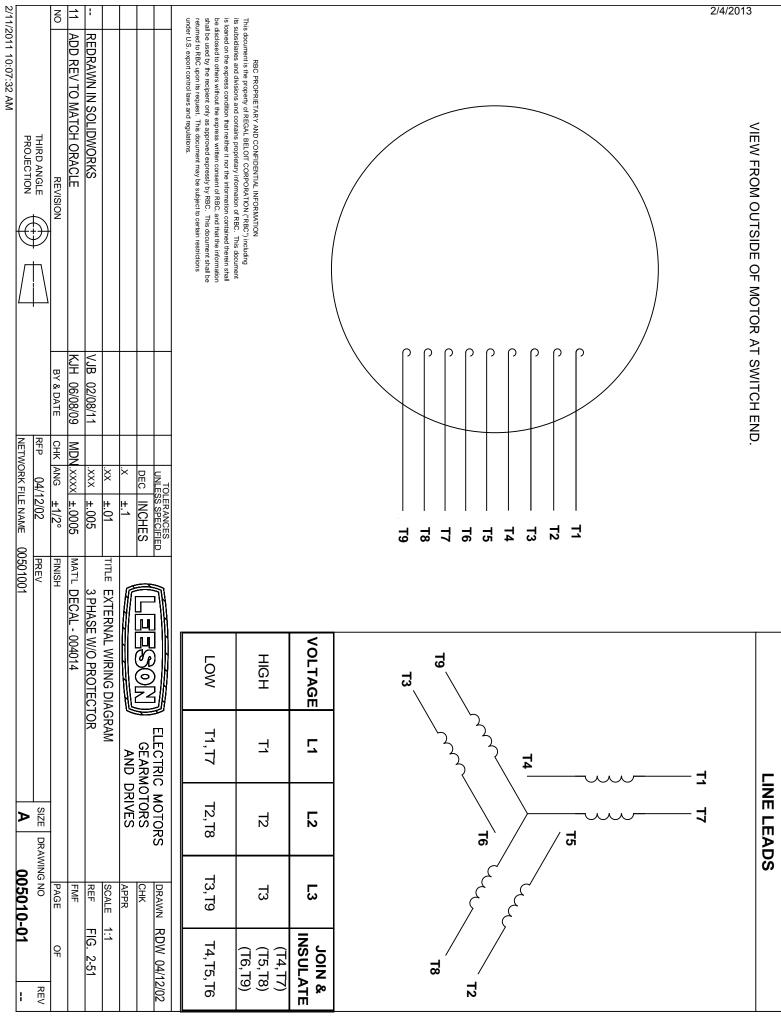
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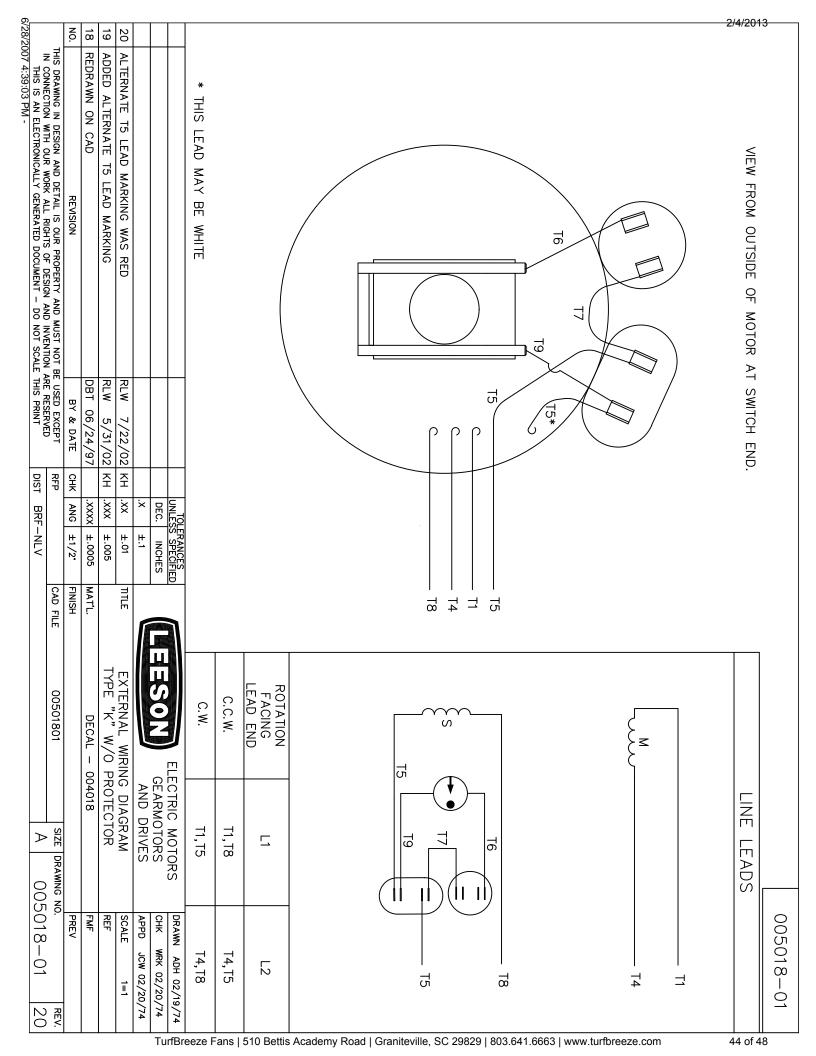
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