

Turbo **KOOL**

Model 2B

Installation Manual May 2017



CAUTION: TurboKOOL is not FAIL SAFE!!!
Do not use where the lives of children, pets or livestock depend on the TurboKOOL and NEVER leave them alone in a hot vehicle. When carrying children, pets or livestock, it is always wise to have a backup and an alarm system.
Neither Pacific RV Parts, LLC nor TurboKOOL will be held responsible for death or injury caused by improper use of the TurboKOOL

TurboKOOL

Model 2B

Installation Manual

Effective May 2017

**TurboKOOL Unite does not come with solar or battery.
Read this entire Instruction Manual before proceeding.**

A 14" x 14" Vent Frame is RECOMMENDED

Turn Power Off First

The vent frame is a very important and integral part of your TurboKOOL installation, and must be securely in place before attempting to continue with the TurboKOOL installation. If installing over an existing ceiling vent, remove the dome and the crank mechanism, and if possible, **leave the vent frame that is sealed to the roof in place.**

If replacing a ceiling fan or air conditioning unit, there may or may not be a vent frame sealed to the roof. **If there is no vent frame, one must be sealed (ex: silicone sealant or putty) to the roof before continuing with the TurboKOOL installation.** Vent frames are available from your local dealer or from PRV Parts, LLC.

If there is no 14" x 14" opening where you want to install the TurboKOOL, you should consult with your local dealer to identify where and how to cut a hole.

If your installation is on a thin roof that might give a little under the weight of the TurboKOOL (about 18 lbs), you may wish to install a reinforcement gusset to the inside ceiling using the vent frame screws to secure it in place. You can either make a gusset, or they are available from Bachman Enterprises, Inc.

1. Remove vent cover, operating mechanism, and screen from 14" x 14" roof vent. **DO NOT REMOVE VENT FRAME.** If installing where there is no existing vent frame, either contact your local RV dealer to secure a used vent frame, or you may purchase a new one through PRV Parts, LLC. **You must have a vent frame securely sealed around your roof opening before you can install the TurboKOOL to minimize possible spillage. If you install a new vent frame, you can use silicone sealant or putty to secure it, and screw it to the roof. (Vent frame screws not included).**

2. Place foam tape (furnished with your TurboKOOL) around the under side of the TurboKOOL unit mounting flange (outer lip) in **Fig. #1-G.** Leave a 1/4" gap at two opposite diagonal corners of the TurboKOOL. These gaps assure drainage of any water that may get between the unit and the roof from condensation or possible spillage.

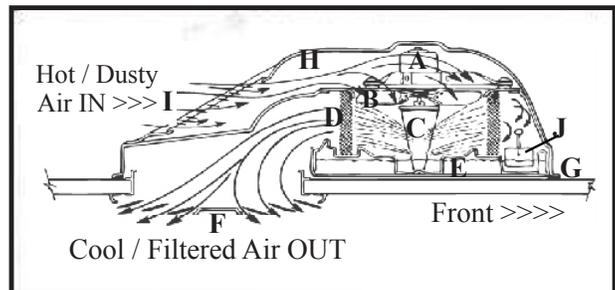


Figure #1

- A. 12-Volt DC Reversible Turbo-Motor
- B. Air Impeller
- C. "Spin-Spray" Pump
- D. 360 Degree Industrial Filter Element
- E. Waterpan
- F. Exhaust Grill
- G. Mounting Flange (note roof seal)
- H. Weatherproof Hood
- I. Intake Grill
- J. Automatic Water Float Valve

3. Position the TurboKOOL with intake grill to the rear. **See Figure #1-A below.** With hood removed, place TurboKOOL over the roof vent frame so it fits flush to the roof and level with the ground. It is sealed to the top side of the roof with the verticle flanges facing upwards to form a dam around the hole in case a water line should leak. (Vehicle should be relatively level for installation.)

If mounting to a sloped or curved roof, you will need a plenum, which can be fabricated from sheet metal, marine plywood or polyethylene.

If necessary, a mounting gusset can be used to lend rigidity to the mounting surface. It's made of 1/4" thick plastic and is usually fixed to the underside of the roof.

Placement & Clearance Guide for TurboKOOL Coolers

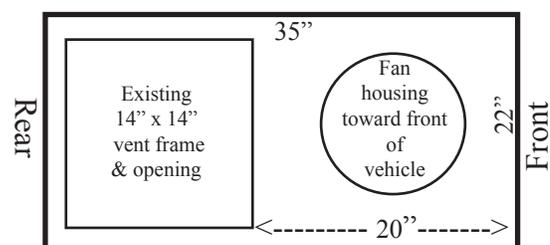


Figure #1-A

4. As shown in **Fig. #2 below**, fasten the two square ceiling bracket plates (E) to the under side of the vent hole or on the rim of the inside frame. Use the (6) #8 x 3/4 screws - three in each of the 3 smaller holes in each plate. These plates mount in the front two corners and are placed so the large hole in each plate is approx 13" center-to-center and below the two holes in the TurboKOOL body.

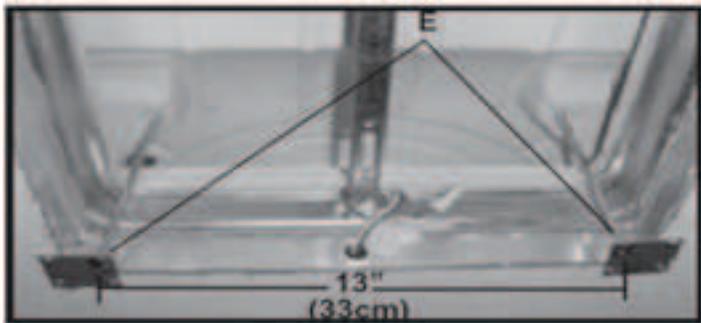


Figure #2

5. From inside the vehicle, insert the two long bolts, 1/4-20 x 10" through the larger remaining hole in each of the ceiling plates (**Fig. #2-E**) and up through the two holes in the TurboKOOL body. If installing alone, use a piece of masking tape to hold each bolt in place until top nuts can be installed.

Place 1/4" x 3/4" flat washer and 1/4" hex nut on each bolt and **HAND TIGHTEN. DO NOT USE A WRENCH.** Now apply the other 1/4" hex nut from the kit, holding the bottom nut with a wrench. Tighten the top nut, locking the 2 nuts together. **Longer mounting bolts:** If longer mounting bolts are necessary for your particular application, you should be able to improvise by using a 1/4" piece of all-thread rod.

6. Refer to **Fig. #3**. This Bracket is used to secure the front facing flange of the TurboKOOL unit to the roof.

1. Install this bracket on the front facing flange of the TurboKOOL unit.
2. Locate the bracket so the screws will get a good hold in the roof structure.
3. Secure the bracket with the three screws supplied.
4. There is butyl tape seal attached to the back of the bracket to aid in sealing the roof.

*** It is the customers responsibility to make sure the roof is sealed appropriately per the vehicle manufacturer recommendation.



Figure # 3 Hold Down Bracket

7. **The Plumbing & Hardware Pack** will contain the most common Flair-It "T" fitting. When choosing the proper "T" fitting, the following is a rough rule-of-thumb: Rigs 1997 and newer usually have transparent tubing either clear, blue or red and would use the Flair-It fitting. The older tubing is generally gray.

Cut existing 1/2" water line in your vehicle between vehicle pump and cold water outlet and plumb the Flair-It "T" and valve inline. The placement of your fitting should be in a convenient, easy-to-reach location. (**See Fig. #5 below**).

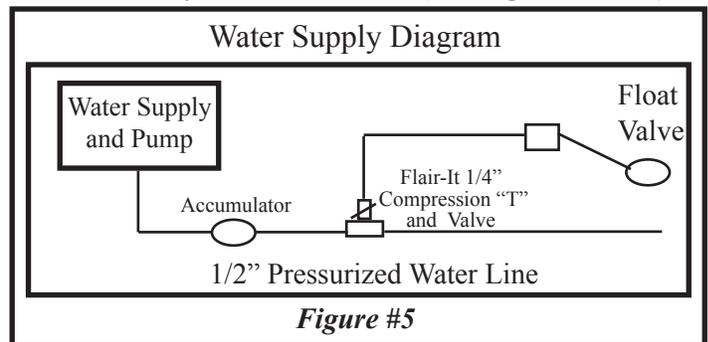


Figure #5

Different water pumps vary in the frequency with which they cycle on & off. If your water pump cycles too frequently, you can remedy this issue by installing a small in-line accumulator tank, available from PRV Parts, LLC.

Choosing a route for your water supply line.

There are two great locations to run the water supply line from the source to the cooler. First, if your water source is close to either your refrigerator or one of the vent pipes leading from your grey or black water holding tanks, you're in luck.

If your water source is closest to the refrigerator, then remove the outside access door and run your quarter inch water supply line and your 12-volt power line if necessary right up through the chase area next to the refrigerator, and right out the little vent holes on the vent cap.

If however your water source is near a black or gray holding tank vent pipe, that may be easiest. Anywhere from 2 to 3 feet from the bottom of the vent pipe, drill a 1/4" hole at a steep (almost vertical) diagonal up through the side of the vent pipe. All the vent pipe does is vent a little gas. No liquids will come out.

Push the 1/4" water line up through the diagonal hole right to the vent cap on top of the pipe. The vent cap should be removable to make it easy to run the 1/4" line right out the vent cap holes, or drill a new hole.

Insert the 1/4" shut-off valve in the side of the "T". The float valve is then plumbed in place by running 1/4" tubing from the float valve (**Figure #6-B on next page**) located outside on the front of the right side of the cooler) to the 1/4" tube connection on the "T"/valve shut-off fitting of your water supply.

To install water supply tubing from inside the vehicle, (for example: if you're using a stand alone water tank), a 1/4" hole must be drilled into the air exhaust section of the TurboKOOL body. Note dimple hole just to the right of serialized label on the TurboKOOL body for drilling hole. **Figure #6 (C).**

BE CAREFUL NOT TO DRILL INTO WATERPAN
Run tubing from inside, through the 1/4" hole to the float valve on outside of the TurboKOOL body. **Figure #6 (B).**

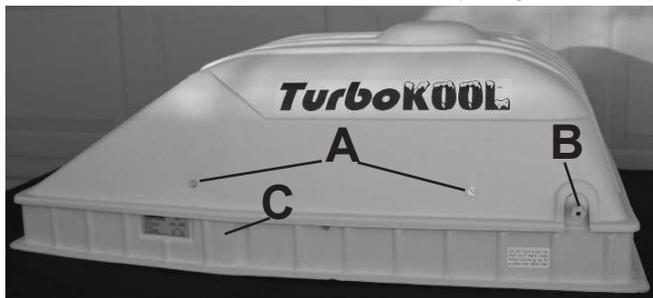


Figure #6

See **Fig. #4 (K).** The Model 2B is fitted with a float valve which controls the water level in the water pan. It is adjusted at the factory, but may be knocked out of adjustment during shipping.



Float Valve

Important: When tightening the brass compression nut that secures the 1/4" tubing to the Float Valve, be very careful not to allow the Float Valve to turn. Once it's tight, look inside (Figure #4) & make sure the Float Valve is aligned so that it operates straight up & down.

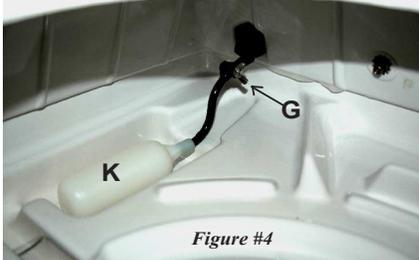


Figure #4

To adjust the float valve with serial #41200 & higher:

This is easier if you have 2 people! Remove the hood, lay the motor/fan/spin-spray pump to one side and remove the large black industrial filter. Reach inside the cooler and just loosen the butterfly nut **Fig. #4 (G)**, allowing the float valve to float freely. Let in a very small amount of water. When the water level in the water pan reaches 3/4 - 1" deep, have your helper quickly close the shut off valve. Then you can take your time setting the float and tightening the butterfly nut. To be sure you've got the right water depth, do this procedure several times until the float valve automatically shuts off every time without your intervention. Next replace the motor/fan/spin-spray pump. At this point, be sure that the bottom of the spin-spray pump is between 1/2 - 3/4" above the bottom of the water pan.

If the valve stays open too long, the water will continue to flow into the waterpan until it overflows. If the valve closes too soon, then not enough water will flow into the waterpan. Ideally the valve should shut off just as the water reaches the bottom of the clear plastic baffle ring.

To adjust the float valve with serial # up to 41200:

There is a 1/4" hole in the body, directly in front of the float valve. Using a (#1) 1/4" philips head screw driver, insert the head of the screw driver until it seats in the adjustment screw. Loosen the set screw until the water is at the desired level, then tighten the set screw. In some pre #41200 units, there may not be an adjustment hole and/or the set screw may be facing the wrong way. You may wish to remove, reverse and re-set the set screw. If there is not an access hole, you may wish to drill a 1/4" hole in the body directly in front of the float valve.

Warning: Before starting your TurboKOOL, it's very important that the water level be checked. Make sure the float valve is adjusted to shut the water off when the water level in the water pan gets no deeper than 3/4 - 1" deep.

Note: PRV Parts, LLC does not recommend driving with your TurboKOOL on. However, if you take it upon yourself to do so, do not drive over extremely bumpy roads (such as off-road) as this may cause spillage.

If you are going to drive on extremely bumpy roads, you can shut off your water supply by switching off the power to the pump or closing the shut-off valve to the water supply. The reason for this is to prevent possible spillage into your unit. You may wish to run the cooler on "HI" speed for a few minutes after you shut the water off to lower the water level in the waterpan before driving.

To change the filter in your TurboKOOL -

Remove the hood, lay the motor/fan/spin-spray pump to one side and remove the large black industrial filter (**Figure #4-A**). Replace it with a new filter and replace the motor/fan/spin-spray pump. You can hose the dirty filter down, or soak in a bucket of soapy water or water with apple cider vinegar to loosen dirt & alkaline.

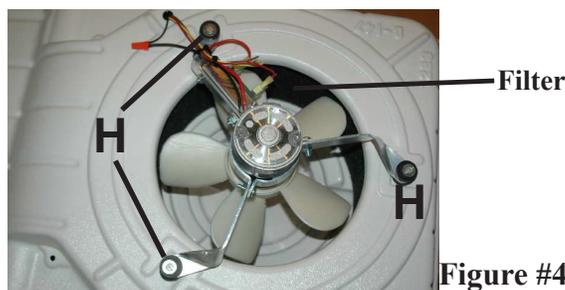


Figure #4-A

8. From inside the vehicle, extend wire harness from the motor through the ceiling vent opening and attach to the 2 wire connector on the exhaust grill.

9. Using the orange wire nuts furnished, connect your 12-volt power source to the two leads on the cooler. It is **EXTREMELY IMPORTANT** that at least #16 stranded wire (#14 preferred) be used to bring electrical current to your TurboKOOL. A 10-amp fused in-line pigtail is included to protect your TurboKOOL and your electrical system.



10. The exhaust grill Fig. #8, can be mounted for permanent installation. Using the 4 outer dimples in the underside of the exhaust grill flange as location guides, drill four 3/16" holes. Center the exhaust grill over the vent opening and attach it to the ceiling with the four #8 x 3/4" exhaust mount Phillips head screws provided.

11. Always make sure your water supply is getting to your TurboKOOL, although your TurboKOOL will not be harmed if you run it just as a "fan" without any water. **Water can be supplied in numerous ways such as::**

- a. Existing pressurized water system in the vehicle
- b. A manually pressurized stand alone water tank which is plumbed to the 1/4" tube leading to the TurboKOOL float valve. The TurboKOOL 2B-1005R 3-gallon Water Supply Tank, or the 2B-1800R 15-gallon Water Supply Tank w/ 12-volt pump included, are made for this purpose. They are available directly from PRV Parts, LLC..

A separate on-demand 12-volt pump is also available.

12. It is recommended that you use an in-line water filter to maintain good quality water for optimum evaporative efficiency. The blue in-line filters work very well and are available from PRV Parts, LLC..

Do not use chemically softened water. It is believed to plug up the TurboKOOL filter.

13. While the hood is removed, **it is very important that you check to be sure that the bottom of conical Spin-Spray Pump is between 1/2" and 3/4" above the bottom of the waterpan.**

Never allow the bottom of the Spin-Spray Pump to touch the bottom of the waterpan as it will drill a hole right through the bottom.

Also at this time, check to make sure the fan can turn freely within the venturi opening.

Now replace the hood back over the body and secure with the 4 hex screws.

We have a staff of experienced technicians who can answer your technical questions or give you more information on our products. Just call our Tech Support and Customer Service number: 714-795-2424 info@PRVParts.com

Notes to Keep in Mind

The waterpan is not waterproof, but is splash resistant. PRV Parts, LLC does not recommend driving with your TurboKOOL on. However, if you take it upon yourself to do so, do not drive over extremely bumpy roads (such as off-road) as this may cause spillage.

If you are going to drive on extremely bumpy roads, you can shut off your water supply by switching off the power to the pump or closing the shut-off valve to the water supply. The reason for this is to prevent possible spillage into your unit. You may wish to run the cooler on “HI” speed for a few minutes after you shut the water off to lower the water level in the waterpan before driving. Occasionally, as use and environment dictate, you should remove the hood, motor mount assembly and the clear baffle ring from the waterpan to clean out all the dust and pollen that has been removed from the air by the filter element.

It is easiest to use a paper cup to remove the majority of the water from the circular waterpan. Then use a towel or sponge to absorb and remove the remaining water & dirt. This is a good time to clean or replace the filter element.

IMPORTANT: When using the TurboKOOL as an exhaust, TURN OFF WATER SUPPLY.

The water still in the unit will be thrown out and will run down on the roof of the vehicle and can also cause fan motor damage.

SPEED SELECTION SWITCH: The center position on the speed switch (unmarked) is the “LOW” speed. **WHEN SWITCHING FROM “EXHT” TO “COOL” or from “COOL” TO “EXHT”, FIRST TURN POWER SWITCH TO “OFF” AND WAIT UNTIL THE FAN HAS STOPPED ROTATING BEFORE SWITCHING DIRECTIONS.**

Draining and Cleaning

If you are draining the cooler in preparation for freezing weather, you will want to make sure the circular tray and the float valve tray are both empty and the water line from the main water supply leading to the cooler is drained and possibly blown clear.

To drain the 1/4” supply line in preparation for cold weather, first close the shut off valve from your pressurized supply line. Then loosen the 1/4” compression nut at the shut off valve, removing the 1/4” line and allow it to drain into a paper cup. Next remove the 4 screws securing the hood and remove the hood. Remove the 3 screws that hold the motor mount

assembly to the body. *(Be very careful not to misplace the 6 rubber motor mount bushings. Note the sequence - the bushing with the metal washer is on top).*

Gently turn the motor assembly over and lay to the side. You can now reach inside and remove the two thumb screws, allowing you to remove the baffle ring. At this point you may also wish to remove and replace or clean the filter. With the filter and the baffle ring out, you can now clean out all the dust and pollen that has been removed from the air by the filter element. A sponge works well to remove the water.

How TurboKOOL Technology Works

The cooling is caused by evaporation. (see Fig #1 on pg 2). Warm, dirty, dry outside air, with its low relative humidity, is pulled into the cooling unit by the fan, while water is being sprayed by the Spin-Spray Pump onto a cylindrical, porous non-organic filter. As the dry dirty air is forced through the wet filter by the fan, the pollen & dirt are removed and the water is evaporated, which cools the air coming out of the cooler. This cool air must be allowed to flow

freely through the unit being cooled, and out through a small opening in a window, door or vent. If the air flow is restricted, the cooling will be much less. The efficiency of evaporative cooling is dependent upon many factors: size of the unit being cooled, how well it’s insulated, exterior temperature & humidity are just some of the variable factors that can affect the cooling efficiency. The efficiency chart on Pg. 10 will give you a rough idea of the performance you can expect.

Troubleshooting

UNIT DOES NOT OPERATE:

1. Try switches at all speeds in both directions.
2. Check wire connections at switches, resistors, at wire nuts and at power supply.
3. Check fuse and charge level of battery.
4. If installed on a trailer and operated on vehicle battery, check if inner connection is correct.
5. With speed switch in OFF position, remove hood. Rotate fan by hand to check for interference with venturi opening. Check filter, pump rubbing on bottom of waterpan, or motor frozen.
6. Check for mineral/salt deposits in and around mechanical parts such as fan blade, spin-spray pump and water cup.

INADEQUATE COOLING:

1. If no air flow, check above items 1 thru 5.
2. Check water level, water supply lines and valve.
3. Check filter and pump. If dirty, clean as directed under maintenance.
4. Check to see pump cone tip is submerged in water and check 1/2 - 3/4" clearance between end of pump cone and bottom of circular waterpan.
5. If water depth is less than 3/4 - 1", depress float and observe if water is flowing thru the valve. Refer to Item #5 - Adjustment Procedures on page 9 to reset.
6. Check filter for mineral/salt deposits that can cause the filter to perform very poorly.

EXCESS VIBRATION:

1. Check fan blades and pump cone, rotating by hand. Note whether fan blades are broken or if cone set screw is loose. Are fan blades hitting filter or edge of venturi opening?
2. Check for loose screws, loose or deteriorated rubber motor mounting bushings. Replace if needed.
3. Excessive mineral/salt deposits can cause imbalance in the fan blades and the spin-spray pump - in turn, creating a vibration.

WATER LEAKAGE:

1. Check to make sure your unit is mounted on a portion of the roof level with the ground.
2. Check water level in unit. Refer to Item #5 "Adjustment Procedures" on page 9 for float valve adjustment.
3. Also See "Notes to Keep in Mind" on Pg 6.

EXCESS WATER CONSUMPTION:

1. Check items listed under Water Leakage above.
2. If rate of water consumption is not due to a leak, but instead only during operation, remember, your Turbo-KOOL is providing cooling effect in proportion to the water consumed. Under conditions of high temperatures and low humidity, more water is used.
3. Driving conditions, such as rough roads, stop and go or sharp turns cause excessive action of the float valve and may allow the unit to overfill. (See "How Turbo-KOOL Works).

DO NOT try to run a TurboKOOL 12-volt DC motor with a 110-volt power source without a transformer. TurboKOOL units can run from standard 110-volt house current if you use a 12-volt DC transformer. This will reduce the 110-volt down to 12-volt DC. If you're unsure, please seek professional advice.

Operating your TurboKOOL

TO USE FOR COOLING:

- * Turn on the water pump in your vehicle to fill the unit.
- * Open a window or vent in your vehicle 1-2 inches in the area to be cooled or past the area to be cooled.
- * Press "COOL" switch.
- * Select speed "HI", "MED" or "LO"
("LO" is in the center position - not marked)
- * Press "ON" switch. After initial cooling, we recommend you run unit on "MED" or "LO" speed to conserve water and power.



Figure #9

TO USE AS EXHAUST:

Shut off water supply. (Unit will throw any water in reservoir out the top). Open window or vent to draw air into vehicle. Press "EXHT" switch. **(DO NOT USE TO EXHAUSE COOKING FUMES AS GREASE WILL CLOG FILTER.)** Select speed and press "ON" switch.

This unit is recommended for use in areas where the average relative humidity does not exceed 75%, or generally the western part of the U.S. (see Efficiency Chart on Page 10).

MODEL 2B SPECIFICATIONS		
Capacity:	HI - 750 CFM	(28cmm)
	LO - 450 CFM	(17cmm)
Electrical:	12 VDC	
AMP Draw:	Maximum 4.6	
Weight:	16 lbs.	(7.2kg)
Length:	35"	(89cm)
Width:	22"	(56cm)
Height:	11.5"	(29cm)



Removal, Replacement and Adjustment Procedure

1. Disconnect electrical power to the unit.
2. Refer to **Fig. #6 (A) on page 4**. Remove 4 screws (2 on each side) and remove hood.
3. Refer to **Fig. #4-A (H) on page 4**. Remove the 3 screws at (H). Remove (as an assembly) - the motor, 10" fan and the spin-spray pump. Gently turn over and lay to one side.
4. Remove cylindrical filter through the venturi opening & replace if needed. The float valve is now accessible for adjusting if necessary.
5. **To adjust or install a new float valve:**
For units with Serial #41199 or lower refer to Fig.#4 and adjust as follows: Insert a #1 Phillips screwdriver into the 1/4" hole on the front of the body near the right side. Align the screwdriver tip into the head of the screw on the float valve. Loosen the Phillips head screw. With water supply on & operating at normal pressure, adjust the float valve to obtain 7/8 to 1" water depth. Tighten the Phillips screw.
For units with Serial #41200 or greater refer to Fig. 4 and adjust as follows: Loosen the wing nut (G) under the valve. With water supply on and operating at normal pressure, adjust the float height to obtain 7/8" to 1" water depth. Tighten the wing nut.
In either case, the water should be just touching the underside of the clear plastic ring.
See page 4 for more complete details.
6. If replacing motor, air impeller, or spin-spray pump, refer to Fig.#9. To install new air impeller, proceed as follows: Impeller is a friction fit (metal retainer springs) on the motor shaft. With air impeller hub away from motor, align flat on impeller with flat on motor shaft. Now push air impeller all the way up to the motor. (Hold approx. 1/16" away). To install new spin-spray pump, mark shaft where the pump is before removing. Loosen set screw on pump and slide pump off shaft. This is the time to pull the air impeller off the motor shaft if it is to be replaced. Now slide pump back on shaft to your mark, and set screw to flat side of shaft and tighten set screw. The bottom of the pump cone should clear bottom of water baffle cup by 1/2" to 3/4". **Do not allow cone bottom to touch bottom of water cup.**
7. Refer to Fig.#4-A on pg.4. To re-assemble, reverse your steps. When you have set the motor assembly onto the body, spin the fan blade to be sure it turns freely. If it rubs on the edge of the venturi opening, loosen the 3 screws (H) and move the assembly to obtain uniform spacing through full turn.

TO PREVENT LEAKAGE WHEN USING PLASTIC TUBING SUPPLIED, BE SURE TO USE PLASTIC FERRULES & INSERT THE BRASS INSERTS INSIDE THE TUBING AT ALL CONNECTIONS. IF COPPER TUBING IS USED, THEN ONLY USE BRASS FERRULES.

Recommended Routine Maintenance

1. Every 6 months or as needed, remove the filter and clean by hosing down with water from outer surface inward, or soak in a bucket of soap & water or apple cider vinegar to loosen dirt, alkaline etc. If your TurboKOOL is used in certain areas where the water has high alkali content, it may be desirable to clean more often. In these areas it may be to your advantage to have an extra filter on hand.
2. Check the spin-spray pump cone for caking of alkali and clean off with fine steel wool. Make sure the holes at top of cone are not clogged. Since the inside of the cone pump can also become caked with alkali, you may wish to replace it periodically if performance drops.
3. The motor is equipped with factory oiled and sealed bearings. Under normal use, the bearings need no additional oil. If used in high alkali areas for long periods of time, a drop of oil in the lower bearing (3-in-1 or sewing machine oil) will help. We recommend that you turn on your TurboKOOL, either wet or dry, at least once a month and run for 5 minutes or more, even during the off season.
4. Before the start of the warm season, check the condition of the filter, motor mount grommets and wiring. Replace if they are cracked, brittle or deteriorating.
5. To clean the circular waterpan, remove the hood and 4 screws, and the 3 screws holding the motor mount assembly. Remove (as an assembly) - the motor, 10" fan and the spin-spray pump. Gently turn over and lay to one side. Remove the filter. Remove the two thumb screws holding the baffle ring onto the water tray. You may now wipe out the circular water tray.
6. Contact your local dealer or PRV Parts, LLC for any parts required, or for assistance in case you encounter problems. Always include the model number and serial number when writing. Both numbers are found on the I.D. label, see Fig.6 on the side of the body.

Technical Support

We have a staff of experienced technicians who can answer your technical questions or give you more information on our products.
Just call our Tech Support and Customer Service number:
PRV Parts, LLC 714-795-2424 or email: info@PRVParts.com

TurboKOOL is not responsible if Installation Manual is not read completely before installing / using your Turbokool.

Efficiency Chart																												
Outside Air Temperature F	125	83	86	90	93	96	Expected Cooler Efficiency																					
	120	81	83	86	90	93	95	Temperature Output																				
	115	78	80	83	86	89	91	94	Fahrenheit																			
	110	75	77	80	83	85	87	90	92																			
	105	72	74	77	79	81	84	86	88	89																		
	100	69	71	73	76	78	80	82	83	85	87	88																
	95	67	68	70	72	74	76	78	79	81	82	84	85	87														
	90	64	65	67	69	70	72	74	76	77	78	79	81	82	83	84	86											
	85	61	62	63	65	67	68	70	71	72	73	74	75	76	77	79	81											
	80	57	58	60	62	63	64	66	67	68	69	71	72	73	74	76	77											
	75	54	55	57	58	59	61	62	63	64	65	66	67	68	69	70	71	72										
		2	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	% Relative Humidity									

Outside Air Temperature C	52	28	30	32	34	36	Expected Cooler Efficiency																					
	49	27	28	30	32	34	35	Temperature Output																				
	46	26	27	28	30	32	33	34	Celcius																			
	43	24	25	27	28	29	31	32	33																			
	41	22	23	25	26	27	29	30	31	32																		
	38	21	22	23	24	26	27	28	28	29	31	31																
	35	19	20	21	22	23	24	26	26	27	28	29	29	31														
	32	18	18	19	21	21	22	23	24	25	26	26	27	28	28	29	30											
	29	16	17	17	18	19	20	21	22	22	23	23	24	24	24	25	26	27										
	27	14	14	16	17	17	18	19	19	20	21	22	22	23	23	24	24	25										
	24	12	13	14	14	15	16	17	17	18	18	19	19	20	21	21	22	22										
		2	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	% Relative Humidity									

TurboKOOL® Limited Warranty 4/1/06

TurboKOOL evaporative coolers are warranted to be free from defect in materials or workmanship for a period of one (1) year from the date of their original retail purchase. If any part of the TurboKOOL unit fails to conform to this warranty, we will replace or repair it using new or refurbished parts.

To obtain warranty service in the United States, you must return the defective part within the warranty period together with the original or a machine reproduction of a dated Proof-of-Purchase document identifying the TurboKOOL unit along with the unit's serial number and a Return Authorization to PRV Parts, LLC, 10662 Stanford Ave, Garden Grove, CA 92840. To obtain a Return Authorization, Call 714-795-2424.

This warranty does not cover defects, malfunctions, or failures resulting from shipping or transit accidents, abuse, misuse, operation contrary to furnished instructions, operation on incorrect power supplies, operation with faulty associated equipment, modification, alteration, improper servicing, tampering or normal wear and tear or TurboKOOL units on which the serial number has been removed or defaced.

Replacement Parts Warranty:

Unless otherwise specified, replacement parts are warranted for 90 days from the date of purchase (parts only). If the part is replaced within the original one year warranty period, then this replacement warranty is superseded by the new equipment warranty and such parts replaced during this time, will be warranted for the remainder of that new equipment warranty.

TurboKOOL evaporative coolers are not warranted to operate without failure. Accordingly, in any use of the cooler in life support systems or other applications where failure could cause injury or loss of life to humans or animals or where spoilage or damage to property may occur,

the cooler should only be installed with appropriate redundancy, fault tolerance and or integrated back-up features. Per PRV Parts, LLC, terms and conditions of sale, the user of TurboKOOL products in life support or property preservation applications assumes all risk of such use and indemnifies PRV Parts, LLC. / TurboKOOL® against all damages.

PRV Parts, LLC shall not be liable for technical or editorial errors or omissions contained herein; nor for incidental or consequential damages resulting from the furnishing, performance or use of this product. Information in this manual is subject to change without notice.

ANY IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE SHALL BE LIMITED IN DURATION TO THE PERIOD OF TIME SET FORTH ABOVE. OUR LIABILITY FOR ANY AND ALL LOSSES AND DAMAGES RESULTING FROM ANY CAUSE WHATSOEVER INCLUDING OUR NEGLIGENCE, ALLEGED DAMAGE OR DEFECTIVE GOODS, WHETHER SUCH DEFECTS ARE DISCOVERABLE OR LATENT, SHALL IN NO EVENT EXCEED THE PURCHASE PRICE OF THE TURBOKOOL UNIT. WE SHALL NOT BE RESPONSIBLE FOR LOSS OF USE, COMMERCIAL LOSS OR OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGES. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS OR THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. This is the only warranty applicable: no one is authorized to extend or modify it or to grant any other warranty.

TurboKOOL / PRV Parts, LLC 10662 Stanford Ave, Garden Grove, CA 92840
Phone: 714-795-2424
e-mail: info@PRVParts.com • website: www.turbokool.com

Plumbing & Hardware Pack

****Warning: Keep the plastic bags away from children****

<u>Part #</u>	<u>Description</u>
2 - #2B-2003	- Screw #10 x 1 1/2 HXSMS (For Hold Down Clips)
4 - #2B-2007	- 1/4-20 Hex Nut (Unit mount to Roof)
2 - #2B-2008	- 1/4 x 3/4 Flat Washer (Unit mount to Roof)
2 - #2B-2011	- Mounting Bolt 1/4-20 x 10" (Mount to Roof)
6 - #2B-2015	- Screw #8 x 3/4 PhilPan T/S (Mount Ceiling Bracket)
4 - #2B-2015	- Screw #8 x 3/4 PhilPan T/S (Exhaust Mount)
2 - #2B-3001	- Orange Wire Nuts 12-14 ga (Connect to Power Source)
2 - #2B-5001	- Square Ceiling Brackets (Mount Bracket to Ceiling)
2 - #2B-5002	- Hold Down Clips (Hold Front Edge Down)
1 - #2B-7004	- Putty Pack (Putty for Hold Down Screws)
2 - #2B-7005	- Rubber Dampener Pad (Pad between Clip & Lip)
1 - #2B-8012	- Flair-It "T" 1/2 x 1/2 x 1/4 (Connect to Water Supply)
1 - #2B-8013	- Flair-It Needle Valve 1/4" (Connect to Water Supply)
1 - #2B-8004	- Plastic Compression Sleeve 1/4" (Compression)
2 - #2B-8005	- 1/4" Brass Insert (Insert in Both Ends of Tubing)
1 - #2B-8006	- 1/4" Brass Compression Nut (Compression)

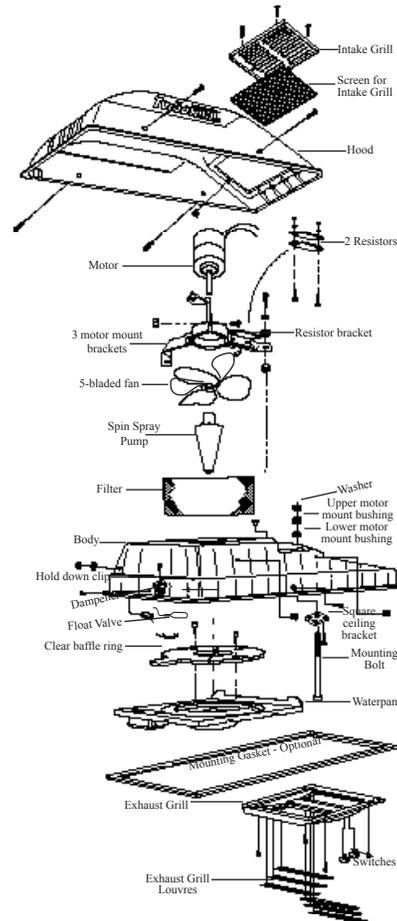
Installation Pack

- 1- Plumbing & Hardware Pack (see contents above)
- 1 - #2B-0206 - Exhaust Grill Assembly (Interior Ceiling)
- 1 - #2B-7003 - 10' Roll Neoprene Mounting Gasket (Seals Unit to Roof)
- 1 - #2B-8001 - 25' Roll 1/4" Turbo Tubing (Water line to TurboKOOL unit)
- 1 - #2B-6502 - Warranty Card (Fill out and return)
- 1 - #2B-6501 - Instruction Manual (Your helping hand)

TurboKOOL

Parts List Model 2B

<u>Part #</u>	<u>Description</u>
2B-0201	Spin-Spray Pump
2B-4010	Waterpan
2B-0206	Exhaust Grill Assembly
2B-0209	Hood Assembly with Intake Grill
2B-1008	5-Blade 10" Impeller
2B-1003	Industrial Filter Element
2B-1006	Float Valve
2B-2003	Screw: #10 x 1/12 HXSMS
2B-2007	1/4-20 Hex Nut
2B-2008	1/4 x 3/4 Flat Washer
2B-2009 2015	Screw: #8 x 5/8 PhilPan T/S
2B-2011	Mounting Bolt 1/4-20 x 10"
2B-2024	1/4" Flat Washer
2B-2031	Sert Bolt 1 1/4"
2B-3003	12-volt DC Reversible Turbo Motor
2B-4002	Body
2B-5001	Aluminum Ceiling Bracket
2B-5002	Hold Down Clip
2B-7001	Upper Motor Isolator Bushing with Washer
2B-7002	Lower Motor Isolator Bushing - no Washer
2B-7003	Neoprene Mounting Gasket
2B-7005	Dampener (hold down clip)



TurboKOOL is quiet simplicity at its best!

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Phone: 714-795-2424

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