

# **ATTENTION!**

**The thermal expansion valve (TXV) connected to the KC exchanger has a small copper tube that is coiled and clamped to the IC fitting. Any damage to this tube will result in the valve closing off, rendering the unit inoperative.**

**Please take care during the install not to bump, cut, or kink this tube.**

**Thank you.**

**Call us if you have any questions.**

**505-275-2665**

**Kincaid Performance Inc.**

## PARALLEL KC KIT / UPGRADE TXV

### SPECIAL TOOLS NEEDED:

HOSE CUTTER (ANY AUTO, OR HARDWARE STORE)

CONCRETE NIPERS (ANY HARDWARE STORE, ABOUT \$16.00)

SMALL CAN OF PAG OIL (AUTO PARTS STORE IN A/C SECTION)

**NOTE: USE PAG OR WD-40 OIL TO THOROUGHLY LUBE THE INSIDE OF THE A/C HOSES AND FITTINGS BEFORE INSTALLATION.**

**MAKE SURE TO LUBE ALL O-RINGS.**

**Note: Do not install KC core assy inside the engine bay, as this will reduce efficiency. Best mounting position is behind the bumper under the headlamp hanging vertical with the fittings pointing down. If mounting unit sideways be sure the AC fittings are below the IC fluid fittings.**

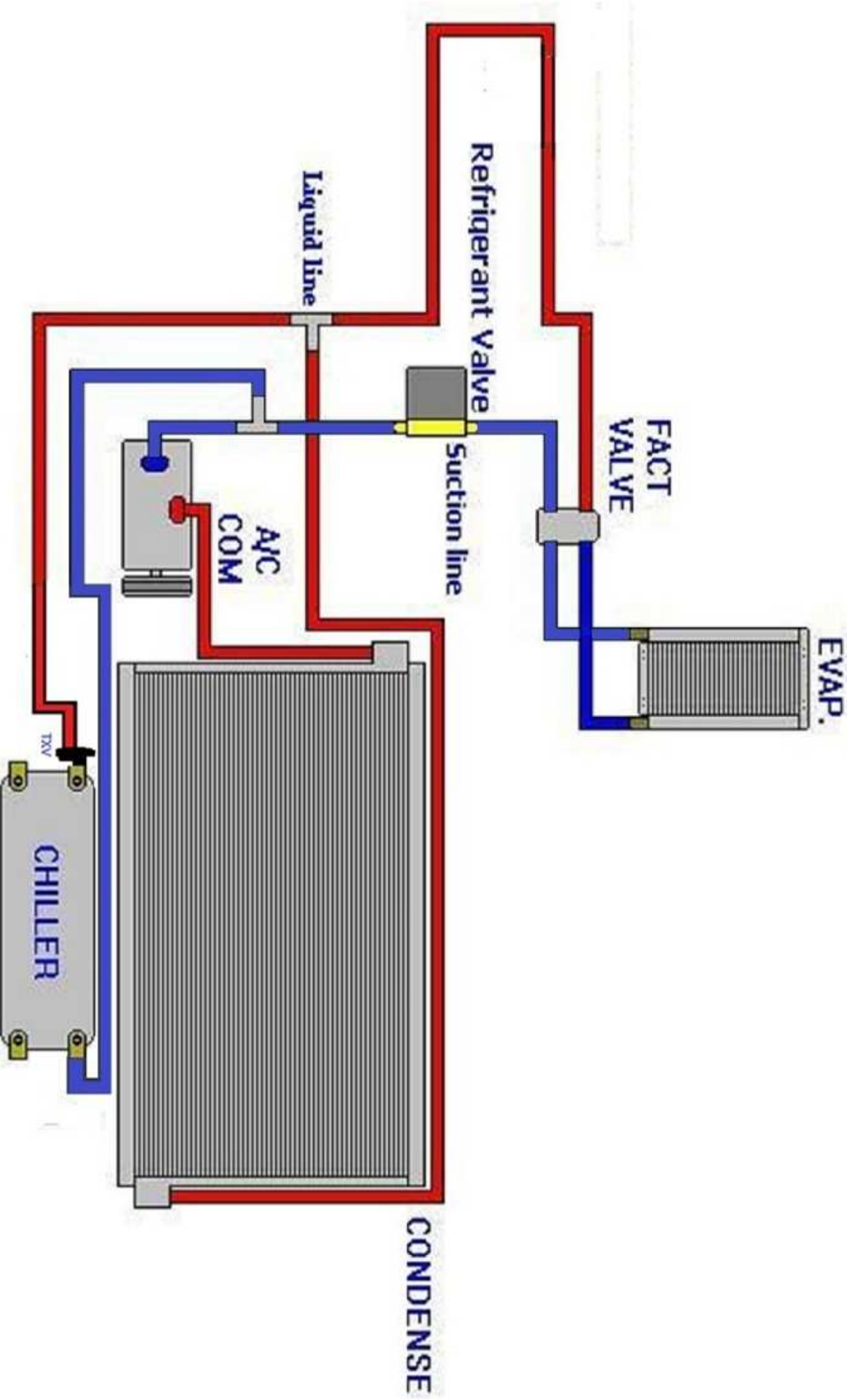
**Be sure to plumb in the KC after the heat exchanger. IC FLUID PATH:**

**IC Reservoir > IC pump > heat exchanger > KC > Intercooler. For max performance either delete, or use a bypass valve for the HE.**

The large ac splicer tee in this kit should be installed in the ac suction line. Find the flexible #12 ac line (5/8) running from the firewall to the ac compressor, and install the large ac splicer tee in this section of flexible hose. You will run a section of #12 (5/8) ac hose from the center port of this ac splicer tee, back to the KC exchanger (suction line fitting). **Note: For the drag kit you will install the valve into the suction line on the firewall side. So coming out of the firewall will be the valve first and then the tee on the compressor side of the #12 (5/8) AC line.**

The small ac splicer tee in this kit should be installed in the ac liquid line, near the condenser. Find the #6 (5/16) ac line running from the condenser to the firewall, and install the small ac splicer tee in the section of the flexible hose close to the condenser. You will run a section of #6 (5/16) ac hose from the center port of this tee, back to the TXV connected to the KC exchanger. (Marked liquid line.)

Please call us if you have any questions 505-275-2665



# INTAKE AIR TEMPS/V.S. DOWNSTREAM TEMPS

The KC is very effective at preventing heat soak, but if you use an open/un-shrouded air filament under the hood it can and will negate this benefit. On a hot day the under hood temps with the A/C on, in stop and go traffic could be as much as 180-200 degrees. In stop and go traffic the cooling fan will be pushing 180-200 degree air right into your air intake.

This causes three problems:

- 1) Your supercharger is pulling very hot intake air and compounding it.
- 2) This puts a bigger load on your A/C system and causes your IC fluid and in-cab temps to be higher than they should.
- 3) This will cause elevated engine coolant temps (ECTs).

Under normal conditions with the A/C engaged, your IC fluid will be around 45-50 degrees, and your intake temps somewhere around ambient. With an accurate IAT-2 sensor you should be seeing downstream temps right around 65 degrees.

Contrast that with an open air filament and you could see air intake temps of about 180 degrees! Now because of this extreme intake temp your IC fluid temps will be around 70-80 degrees instead of 45-50 degrees. With the very high intake temps combined with higher IC fluid temps, your downstream temps will now be around 140 degrees.

Also the A/C now has to remove a lot more heat, and as a result your ECTs will be higher.

As you can see it's extremely important to keep the hot fan wash out of the air intake.

# TIPS FOR IMPROVING KC PERFORMANCE

## 1). INSULATE ALL COLD SIDE A/C I/C LINES, INCLUDING THE SUCTION SIDE LINES.

These lines will absorb heat from the engine bay, decreasing overall A/C, KC efficiency. You can purchase 6 foot sticks of plumbing insulation at any hardware store for about 3-4 bucks a stick.

## 2). INSULATE THE INTERCOOLER TANK.

Again, the IC tank will absorb heat from the engine bay. Any hardware store will have sheets of insulation with adhesive backing.

## 3). REMOVING, BYPASSING, OR BLOCKING OFF THE FRONT OF THE HEAT EXCHANGER CAN DROP TEMPS ANOTHER 10-15 DEGREES.

You can use a piece of Plexiglas to cover the front of the HE during the summer months, and then uncover it during the winter months. You can also achieve the same results by using a three way bypass valve.

## 4). USING AN AUXILIARY PUSHER FAN FOR THE CONDENSER.

The condenser is responsible for shedding off the heat the refrigerant absorbs. By using an aux fan you can increase the A/C's overall efficiency. These fans vary in cost, from \$30.00 – \$50.00.

## 5). HEAT SHIELD FOR THE AIR FILTER.

Fan wash from the radiator/condenser can be as high as 180 degrees with the AC on, so it's a good idea to shroud the air filter, or put it in the fender. Lower intake temps = lower charge temps.

## 6). ENGINE COOLING SYSTEM.

Use a 30/70 mix. Water is much better at transferring heat, antifreeze/coolant is not. Make sure the thermostat is in good working order. A thermostat that only opens partially, or opens late can cause elevated ECT's / IAT-2's, especially when you're using the AC in stop and go traffic.

## 7). INTERCOOLER TANK.

Same as # 6, use 30/70 mix. A larger intercooler tank adds more fluid capacity, more fluid = increased thermal mass. We've seen as much as a 15 degree reduction in iat-2's by using a larger IC tank in conjunction with the KC.

## 8). INTERCOOLER.

Make sure the intercooler is clean. Oil film will create a boundary layer and decrease the heat transfer ability = higher iat-2's.

## 9). ENGINE COOLING FAN.

Make sure the high speed cooling fan (if electric) engages when you turn on the A/C.

## **QUICK NOTE:**

Bypassing or covering the heat exchanger is a good way to increase performance, but if the HE covers a good portion of your condenser, and you're running an aftermarket reservoir, it would be better to leave it uncovered, and run a bypass valve; run a smaller than stock HE, or remove the HE altogether. If the HE is blocked off, and it sits in front of the condenser, you could lose crucial air flow across the condenser/radiator. Make sure there is good air flow through the condenser/radiator if you block off the front of the HE.

If you have any questions please don't hesitate to call us.

505-275-2665

Kincaid Performance Inc.

# Warning!!

The KC can generate below freezing IC fluid temps. Make sure to use a water antifreeze mix to prevent internal damage to your KC core assy.

Note: Do not recharge with refrigerant mixes, use pure refrigerant only.

## **REDESIGNED KC CORE ASSY**

**The new KC core assy has been reduced in length by 4 inches and the plates have been increased from 22 to 30. The core will drop below freezing quicker and maintain a more stable return gas temperature.**

**The end result; better in-cab cooling while still maintaining excellent IC fluid chilling.**

**The new KC core assy can be mounted at any angle, including upside down. You can also mount the KC core either side ways or upright when installing it into the bracket.**

**IT IS RECOMMENDED THAT YOU MOUNT THE UNIT SIDEWAYS, VERTICAL, OR UPSIDE DOWN, SO THAT THE OIL CAN DRAIN OUT MORE EFFECTIVELY.**

**If you mount the unit sideways, or vertical keep the suction AC fitting at the lowest point of gravity-(facing down).**

**If you have any questions, or need any help please contact us @ 505-275 2665.**

**killerinfo@killerchiller.com**

**Thank you,**

**Kincaid Performance, Inc.**



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**Important**

**PLEASE READ THIS NOTICE BEFORE INSPECTING CONTENTS OF PACKAGE**

**Claims for shortages**

**All claims for shortages must be made within 1 week of receipt.**

**Please have your serial number (found on packing list and on the unit).**

**Damaged or lost items**

**If a part is lost (box broken open) or damaged in transit to you, please notify the carrier (UPS, Federal Express, USPS, Truck Company, etc.). Delivery is the responsibility of the carrier. Do not return any damaged parts to KPI. File a damage report with the delivering carrier. All shipments are insured for their full value when they leave Kincaid Performance, Inc.**

**Returns**

**All merchandise leaving Kincaid Performance, Inc. is in new condition and sales are considered final. All returns during our 30 day return period must be authorized in advance and be assigned a return authorization number from Kincaid Performance. Returns must be insured, prepaid and accompanied by invoice or receipt. All returns are subject to a 15% restocking charge. We will accept your returned merchandise within 30 days of your receipt. Returned merchandise must be in its original, new, working condition. Merchandise can not be altered, damaged, or tampered with in any way; this would completely void your return policy and/or warranty.**

**To obtain a return authorization number**

**To obtain a return authorization number, please call or write Kincaid Performance, Inc. You must do this within 30 days, and have your serial number available (found on the packing slip or the unit).**

**Warranty**

**There is a 2 year limited warranty against manufacturer defects on the Killer Chiller core and lines only, and a 1 year limited warranty against manufacturer defects on the temperature gauge, and sending unit if applicable. You must notify Kincaid Performance Inc. within the warranty period. Upon confirmation of manufacturer defects, Kincaid Performance Inc. will replace or repair any defective parts that fail during the warranty period. Kincaid performance Inc. will not be liable for any labor fees incurred by said defects. Warranty excludes and is voided by any misuse, abuse, improper operation or any damage caused by improper/faulty parts independent, and separate from the KILLER CHILLER cooling system. Customer is responsible for shipping product back to KPI. Product must be shipped Prepaid and insured. This limited warranty represents the total liability of Kincaid Performance Inc. Kincaid Performance Inc. makes no other warranties, expressed or implied. KPI shall not be liable for any incidental, indirect, or consequential damages. KPI shall not be liable for any injuries or death.**

**Thank you,**

**Kincaid Performance Inc.**