TRIUMPH CLUB OF NORTH FLORIDA

Volume 30 Issue 6 **July 2018**

Triumph Club Of North Florida

1409 Forest Ave.

Neptune Beach, Fl. 32266

BRITISH CAR CLASSIC MARK XXX

30th Anniversary of Triumph Club of North Florida

October 20, 2018

Kings Head British Pub* 6460 U.S. Highway 1 *St. Augustine, Florida

EARLY REGISTRATION

On or Before October 1, 2018 - $25 for First Vehicle, $15 for Each Additional Vehicle

Early Registrants receive one free T-Shirt - *Additional T-Shirts are $10 each*

REGISTRATION

After October 1, 2018, $30 for First Vehicle, $20 for Each Additional Vehicle

All Registrants after October 1, 2018 may purchase one T-Shirt for only $5.00

For More Information, contact Norm Reimer :(904) 246-6044; suennorm@comcast.net

Notify Norm Reimer of address changes at (904) 246-6044 or email to “suennorm@comcast.net”

Club Officers

President:

Lance Brazil (904) 860-6799 lbrazil@bellsouth.net

Membership Secretary:

Barry Northway (904)-473-5773 trdriver.bn@gmail.com,

Secretary/Treasurer:

Norm Reimer (904) 246-6044 suennorm@comcast.net

Events Coordinator:

Penny Levy, levy.penny@gmail.com

Newsletter:

Steven Arrington (904) 262-7071 arringtonsp@att.net,

Board Members at Large:

Jerry Popp (904) 287-1891 geraldjpopp@bellsouth.net

Walt Lanz (904) 641-4089, C-631-8395; jaxwalt@gmail.com

Member Help Groups

Wiring Problems

Charles Fenwick
Lance Brazil

Polishes, Waxes, Finishes

Lance Brazil

Vintage Triumph racing

Don Marshall
904-259-9668

If you would like to volunteer to help other members with problems on their cars, let us know and you and be listed here.

Coming Events

Aug. 5th - Club Meeting at Kings Head Pub; 1:00 PM, Sunday

Sept.2nd - Club meeting at Kings Head Pub; 1:00 PM

Oct. 7th - Club meeting at Kings Head Pub; 1:00 (final planning for 10/20)

Oct. 20th - British Car Classic, Mark XXX - hosted by TCNF

Nov. 4th - Club Meeting at Kings Head Pub' 1:00 PM

OTHERS:

FCCC - http://www.carcouncil.org/events/ ; for other local car events

Myrtle Beach Britfest 2018" Car Show, Oct. 6, 2018

11/11th – Cigar City Concours d'Elegance, all day, Palm Harbor, FL

11/16th – MG Jamboree

11/17th - Ancient City Car Club Show, Florida School for Deaf & Blind, St. Augustine, FL

Panhandle British Car Association (PBCA) Spring Show which will be April 27, 2019 on Seville Square in Pensacola, FL and will feature 50 Years of the Triumph TR-6 - www.pbca1.com

FCCC - http://www.carcouncil.org/events/ ; for other local car events

President’s Corner

Time is growing short for preparations for the British Car Classic XXX. We still need more volunteers. Everyone is asked to procure at least one item to be used as a door prize. Tools, gift certificates (non-specific to a particular marque car,) or anything they you would like to see on the list of prizes. I have already received a box of items from Moss Motors and await hearing from Victoria British, and The Roadster Factory, who said it would be a while since they are planning their summer party and car show.

There will be a business meeting when we meet on September 2, at 1:00 p.m.

FIRST SMILE:

HIS NAME IS FRANK.....

Mildred, the church gossip and self-appointed monitor of the church's morals, kept sticking her nose into other people's business. Several members did not approve of her activities, but feared her enough to maintain their silence & distance.

She made a mistake, however, when she accused Frank, a new member, of being an alcoholic after she saw his old pickup parked in front of the town's only bar one afternoon. She emphatically told Frank, (and several others), that everyone seeing it there would know what he was doing!

Frank, a man of few words, stared at her for a moment and just turned and walked away. He didn't explain, defend, or deny. He simply said nothing. Later that evening, Frank quietly parked his pickup in front of Mildred's house, walked home... and left it there all night.

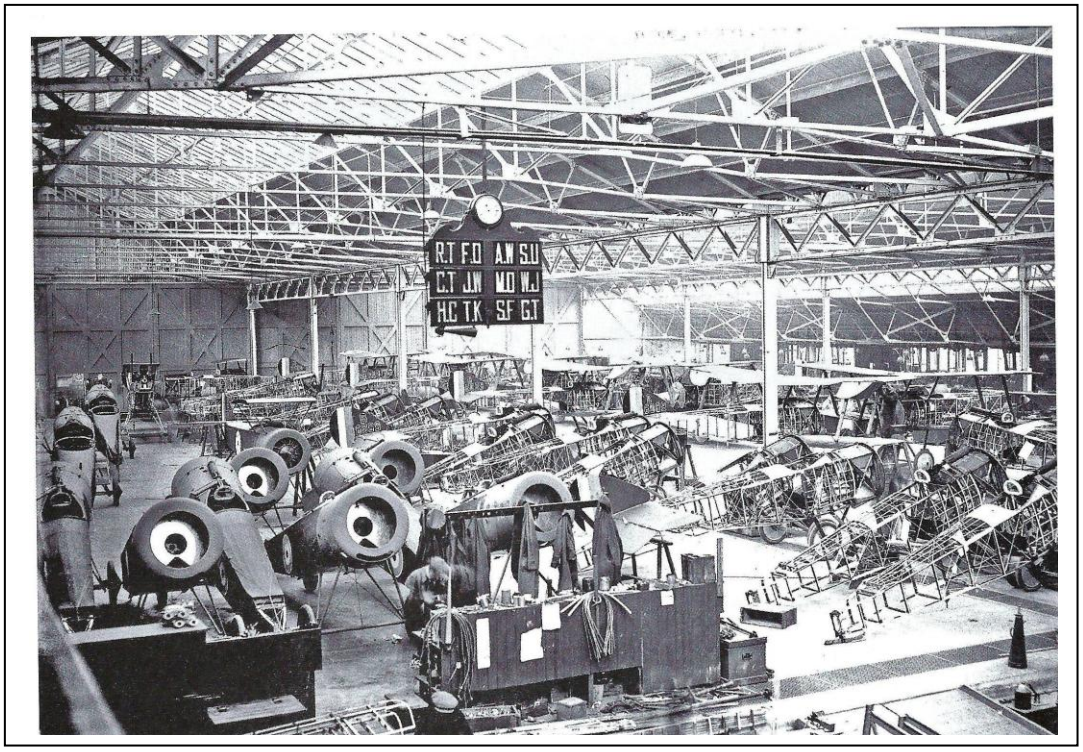
THE BOOK OF THE STANDARD MOTOR COMPANY

by Graham Robson, Veloce Publishing

Chapter 2 (cont): Standard and the Union Flag - Interruption - World War One and Aircraft 1914-1918

When war broke out Briton soon realized that it would not be over quickly, aircraft were just beginning to get a following as to use in war. Soon the government came shopping. Standard had to first wind down its production of the 3.3 liter and the popular 9.5 HP Model S. Standard then in 1915 set about building RAE (Royal Aircraft Establishment) BE-12 fighter, which was a flimsy biplane with a 150HP engine inspired by de Havilland with the first one seeing service by mid-1916. As the facilities all had low roofs and not intended for aircraft assembly, Standard purchased a large tract of land just outside the city which became known as Canley and near what is now the A45 roadway. By 1917 Canley had become a military powerhouse and the administration moved to the "Ivey Cottage" building near the rail line.

Standard built not only the BE-12, but RAE-8 reconnaissance planes, Sopwith Pups, and Bristol fighters. At least 1,600 planes were built here. During 1918 Standard bought another 99 acres adjacent to this plant for 10,000 pounds. But when the military contract stopped by 1919, the entire operation was closed. With this and the other related contracts for things such as filling of artillery shells (work done mostly by women) there were 2,600 standard workers out of jobs.



FOR SALE:




TWO (2) TR3a, 1959, TS61809 and TS64065 plus new parts, extra parts, manuals and lots of extra things for $3,259 or OBO. See all pictures and details at www.triumptr3a-4sale.com or email BBENTKOW@gmail.com

or call (770) 296-2529. Ben Bentkowski, Lawrenceville, Ga

#2





The asking price on this TR8 has been lowered to $9,995. Please contact Cathy Yarger directly if you have any questions. This is an award winning car. Please contact Cathy Henley Yarger with more questions or inquiries.

707-332-2383 or cyarger2@gmail.com

#3

I am selling a TR6 for one of my customers. It's a 1975 and has several upgrades, such as SU carb swap. He is asking $12,000 I have attached a couple pictures. If you could send out a blast to the membership I would appreciate it.

Ron Redding,5R Restorations

33803 Pecan Hill Dr., Brookshire, TX 77423

281-433-8533 cell; 281-346-2417 shop

#4;

Contact : Andrew M Howe V; **Cranewoods Development;** Cell: 904-219-9022; ahowe@cranewoods.com

How A/C works in your vintage car

by Rob Siegel ; (Reprinted from Hagerty Magazine)

It's time to dive into some nice, cold air. Last week, I explained why a guy from Massachusetts became so obsessed with having working A/C in his vintage cars and also described why the A/C needs of a vintage car are different from those of a car built after the switch from R12 to R134a refrigerant. This week, I'll give you the theoretical underpinnings for how A/C works in the automotive environment.
Think of it as eating your string beans before you have your pie.

The theory behind A/C is actually very simple. *When a liquid boils and evaporates into a gas, it expands and cools*. You know this from shaking a can of spray paint or deodorant, feeling the liquid sloshing inside, then spraying it and feeling the can get cold. You've also experienced it when you've mounted a propane tank on a barbecue grille, felt the liquid propane slosh in the tank, and felt how the tank becomes cold to the touch once the grille is turned on and the propane has a path to leave the tank, vaporize, and expand. Nearly all conventional refrigeration and air conditioning works on this principle. It's just that you don't think of it as "boiling," even though that's exactly what the liquid refrigerant is doing, because you're accustomed to boiling water. Anything that's pressurized in a can has a much lower boiling point. For R12, it is -21 °F; for R134a, it's about -15 °F.

It would be woefully inefficient to have a refrigeration system that endlessly releases pressurized refrigerant so it can evaporate, expand, and cool. So, instead, refrigeration and A/C systems work in a closed-loop fashion. They take some kind of refrigerant that is naturally gaseous at room temperature and pressure, pressurize it until it changes from a gas into a liquid, then allow it to evaporate and expand into a gas *inside a container*, and cool. The system then takes the cold created by the expansion (sort of), and blows it at you to cool you off. The gas is then pressurized back into a liquid, completing the cycle.

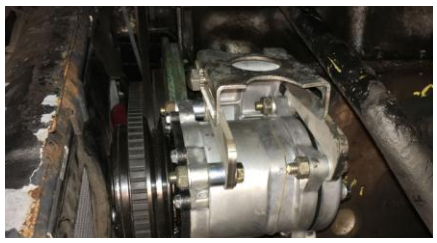
There's one thing we left out. In thermodynamics, there's a saying that there's no free lunch. If you're pressurizing a gas into a liquid so it can expand and cool, you must be generating heat somewhere else, and this heat must be dumped to the outside, or it will heat up the very space you're trying to cool.

You can, if you want, get very geeky and technical about all this (look up *reversed Carnot cycle* and *adiabatic expansion*), but, in terms of theory, that's really all you need to know. An A/C system is essentially like a can of spray deodorant or paint or propane where the sprayed substance is released so it can expand and cool, but is continuously captured, compressed, and put back in the can to spray and cool again. There, those green beans aren't so nasty, are they?

With the theory down, we can identify the major components of an A/C system and what they do:

* The *compressor* is a pump that takes the low-pressure gaseous refrigerant and compresses it into a high-pressure gas. You probably already know that liquid is not compressible; that's why an engine gets ruined if you drive into water deep enough that the water gets drawn into the intake. Thus, the refrigerant drawn into the compressor can't be in a liquid state; it must be a low-pressure gas.

* The *condenser* is like a radiator. It takes the high-pressure gaseous refrigerant supplied by the compressor, and allows it to cool into a high-pressure liquid, dumping the heat to the ambient outside air when it does so. An *auxiliary cooling fan* on the front of the condenser helps the heat to shed.



Compressor to left

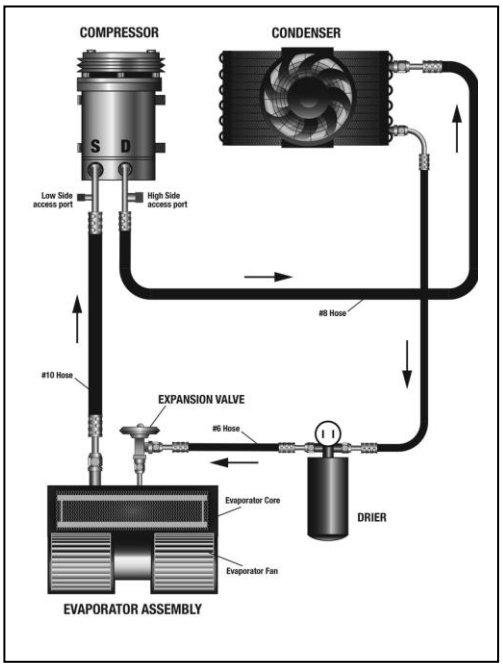
Condenser with cooling fan to right

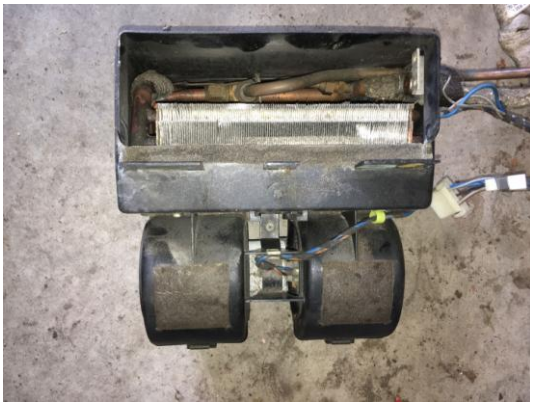
* The *expansion valve* provides a variable restriction to the high-pressure liquid, like a spray nozzle at the end of a garden hose. The refrigerant drops in pressure as it passes through the expansion valve, allowing it to, as the name implies, expand, and then cool. The amount which the expansion valve opens is determined by the refrigerant pressure in the evaporator. On a vintage car, you can sometimes hear the evaporator "sigh" as the expansion valve opens and lets refrigerant spray through it.
* The *evaporator core* is the place where the cooling action is. Not unlike the condenser, the evaporator core is like a radiator with metal tubes surrounded by fins, but it works in reverse from a radiator in that it doesn't dump heat; it *absorbs heat*. The liquid refrigerant sprays from the expansion valve into the evaporator core, where it drops in pressure, boils, evaporates, and expands, thereby cooling. Ideally, the evaporator core runs at about 32°F. Since heat always flows from a warmer body to a cooler one, the air surrounding the evaporator core surrenders its heat and becomes cold. An *evaporator fan* blows the chilled air into the passenger compartment.

As far as the major components of the A/C, that's pretty much it. Note that in a home window-mounted A/C unit, all of these components are contained inside the square box, with the evaporator core located on the front of the box so the chilled air can be blown inside the house, and the condenser located on the back of the box so it can dump the heat to the outside.

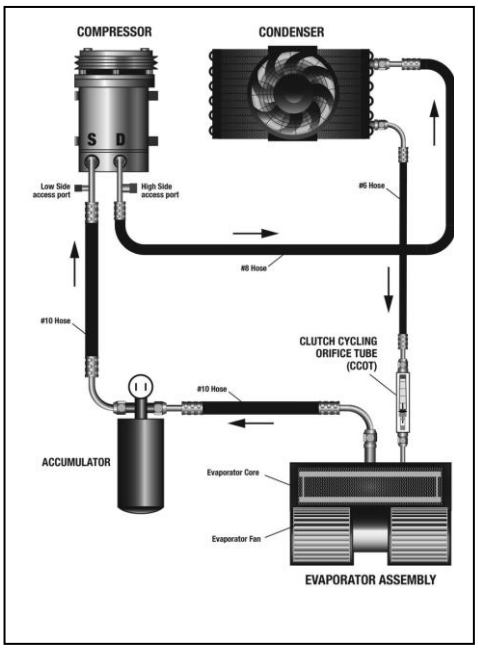
However, in a car, the components are distributed. The evaporator core, expansion valve, and fan are usually together in a box referred to as the *evaporator assembly* that lives inside the car, up under the dashboard, surrounded by the center console. The compressor is mounted to the engine and driven by a belt from the crankshaft pulley. There is a magnetic clutch on the compressor that allows the pulley to free-wheel when the compressor isn't engaged. The condenser and auxiliary cooling fan are mounted in the nose of the car, in front of the radiator, to allow ambient air blown over it by the car's motion to carry the heat away.

I've left out two pieces. There are *hoses and fittings* to interconnect the above components, and there is a *receiver-drier*, a canister that provides extra volume for the liquid refrigerant, as well as a filter to clean it.
When everything is taken into account, an automotive A/C system with an expansion valve looks like this:



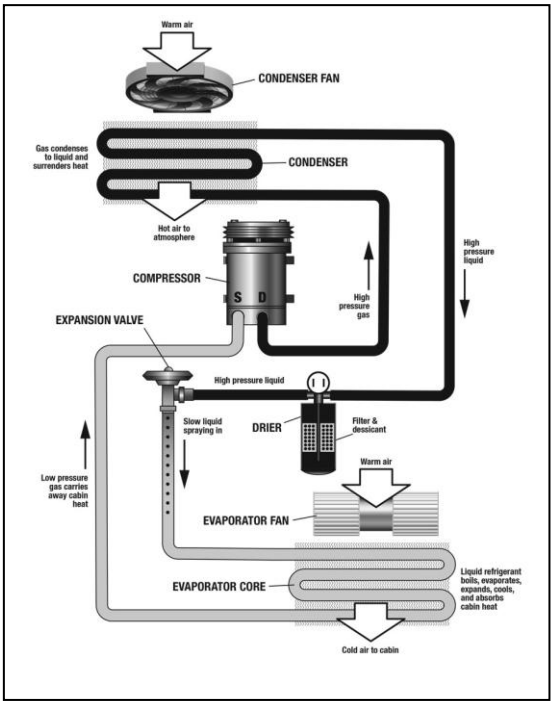


On most vintage cars with A/C, you'll find an evaporator assembly housing the evaporator core, expansion valve, and blower fan inside the center console.



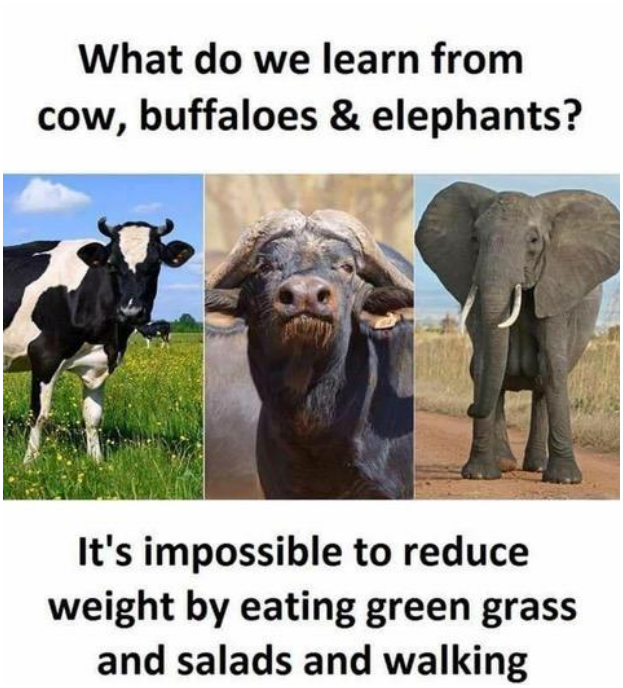
Note that not all systems have expansion valves.
There is another type of system called a Clutch Cycling Orifice Tube (CCOT) system. Whereas an expansion valve, generally located inside the evaporator assembly, provides a variably-sized restriction through which the liquid refrigerant passes, a CCOT system has an *orifice* tube with a fixed-diameter opening, slid inside the metal pipe leading into the evaporator. Because, unlike the expansion valve, the size of the opening in an orifice tube is fixed, there needs to be another mechanism to vary the amount of refrigerant passing through it. For this reason, instead of a receiver-drier, a CCOT system has an *accumulator* with a pressure switch on it, mounted at the outlet of the evaporator instead of at the inlet like on an expansion valve system. The pressure switch opens when the pressure in the accumulator reaches a certain level. This shuts off the compressor. When the pressure falls, the switch closes, turning the compressor back on. The components in a CCOT system look like picture to right.
With all of those components visualized, we now can talk about the "low side" and the "high side" of the system. The low-pressure side, usually colored in blue on diagrams, is where the liquid is evaporating and cooling. It consists of the section starting at the outlet of the expansion valve or orifice tube, through the evaporator, through the accumulator on a CCOT system, and to the inlet or suction side of the compressor. The high-pressure side of the system, usually colored in red on diagrams, is where the refrigerant is condensing and heating up. It runs from the outlet or discharge side of the compressor, through the condenser, through the receiver-drier on an expansion valve system, to the inlet of the expansion valve.
In the diagram below, we combine the physical components with the heat transfer mechanisms occurring in each. To walk it though, low-pressure gaseous refrigerant is drawn into the suction side of the compressor. It's discharged by the compressor out the "high side" as high-pressure gaseous refrigerant. It passes through the condenser, where it condenses into a liquid, surrendering heat to the outside ambient air. The high-pressure liquid passes through the receiver-drier and into the "low side" through the expansion valve or orifice tube. There, the restriction in the expansion valve causes it to drop in pressure and spray, like a nozzle on a garden hose, into the evaporator core. In doing so, the refrigerant boils, evaporates, expands, and cools. This causes the evaporator core to be much colder than the air in the cabin. The cold core thus absorbs heat from the surrounding cabin air, cooling it. The evaporator fan blows the cold air into the cabin (everybody say "*ahhhhhhh*"). The low-pressure refrigerant, warmed by the heat it absorbed from the cabin, is then drawn into the suction side of the compressor, and the cycle begins again.
The diagram shows the heat transfer process for an expansion valve system, but it's very similar for a CCOT system. The main difference is that, instead of a receiver-drier on the inlet side of the evaporator, there's an accumulator on the outlet side with a pressure switch.

Really, that's most of it. For this week, the main take-away messages from our class in automotive A/C theory is this: When an A/C system isn't working, and you've ruled out simple stuff like blown fuses, it could be because the gaseous refrigerant isn't being compressed (bad



compressor) or isn't expanding (clogged expansion valve or orifice tube), but *most of the time, especially in a neglected vintage car, it's because the refrigerant has leaked out and there's nothing left to compress and expand.*

TIME TO SMILE AGAIN;



Join the Triumph Club of North Florida

If you're interested in Triumph cars, You should be a member of TCNF. The benefits are outstanding, a monthly newsletter that is entertaining as well as informative with free ads to members, monthly events, rallies, shows, picnics, tours and camaraderie with fellow enthusiasts…

Membership Application/ Renewal

——————— (Please Print) ———————

New _____ Renewal _____

Name_____

Spouse_____

Address_____

_____

_____

Home Phone ( ) _____

Work Phone ( ) _____

Email Address _____

VTR Member? Yes ____ No____

TRA Member? Yes ____ No____

Car Information

Year Model Comm #

1._____

2._____

3._____

4._____

5._____

Please circle interest in:

Tech Sessions

Social Events

Autocross

Tours

Fun Rallyes

Car Show

T-S-D Rallyes Races

Make your $25.00 check payable to:

Triumph Club of North Florida,
c/o Norm Reimer,
1409 Forest Ave.
Neptune Beach, Fl. 32266