

MODERN MISCONCEPTIONS

Below are some popular myths and misconceptions that have been proven false.

Napoleon Was Short: At 5'6", he was slightly above average height for a Frenchman of the time.

Don't Eat and Swim: This doesn't increase the risk of cramps. Alcohol is the biggest risk increaser. But a full stomach will make you short of breath.

Oil Stops Stuck Pasta: It'll only make it greasy. Stirring prevents sticking.

Don't Wake Sleepwalkers: It's perfectly safe to wake sleepwalkers. They're more likely to hurt themselves if they're not awoken.

Bagpipes Are Scottish: Bagpipes were prevalent in the Middle East centuries before Western Europe.

Salty Water Boils Quicker: Adding a sprinkle of salt to water makes no difference. It can actually make boiling take longer.

Three Wise Men: Nowhere in the Bible does it specify that there were three wise men.

L&M WORD SEARCH

Below is a list of some famous mythical creatures. See if you can find them all in the word search box!

P G F V L D Y U Q Y S H Z F F M V X
R D O L S E R M N Y O O M H I Z T A
P B R B M I P Z W I F A I R I E S W
M L N O L I I R H D C G W J H P R E
H A B Z G I N C E G R O N K Z H N R
Z V G Z Y R N O D C K A R F Q O Y E
V H K W W Y E S T F H G G N J E B W
T V M G N O M E S A H A D O Q N Q O
F B Q F K J C S O F U K U Z N I X L
P J R M Z K B D K B W R W N X X R F
P J U I C Y C L O P S G Y M S G Z O
O D G M E R M A I D O D Z N Z Y K E

HINT: Words may be hidden in all directions ↑ ↓ → ← ↘

CYCLOPS
DRAGON
FAIRIES
GNOMES

GOBLINS
LEPRECHAUNS
MERMAID
MINOTAUR

OGRE
PHOENIX
UNICORN
WEREWOLF



encores

COMMON COOLING SYSTEM MISCONCEPTIONS



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We have designed thousands of cooling systems for many kinds of products and environments. Along the way, we have found there are some common cooling system misconceptions that still show up from time to time. Like rumors on the Internet, some of these misconceptions are hard to get rid of, they keep popping up again and again. So, we have decided to put together a group of the most common ones.

THE COOLANT IS GOING THROUGH THE RADIATOR TOO FAST TO BE COOLED:

It is not possible to put coolant thru the radiator too fast. Faster flow always increases cooling as it increases turbulence in the tubes. Low flow results in laminar flow, no mixing of the coolant so only the outer boundary of the coolant flow is cooled. The only limit on coolant flow is pressure drop – too much pressure drop can lower the pump output.

RADIATOR TEMPERATURE DROP IS AN INDICATION OF PERFORMANCE:

The temperature drop across the radiator is a function of the heat load and coolant flow – not radiator performance. The formula is $\Delta T = Q (\text{heat load}) / m (\text{coolant flow}) C_p (\text{specific heat of coolant})$. Measuring the coolant temperature drop at any other point than the design point – usually full coolant flow and full engine load – is not an indication of system performance. If the engine is not up to full operating temperature, the thermostats will not be open, resulting low coolant flow / increased coolant ΔT .

MORE RADIATOR VOLUME MEANS MORE PERFORMANCE:

This dates to the days of larger radiators having more internal volume than smaller, less cooling capable radiators. A larger system volume only means that the coolant will take a bit longer to heat up than a system with less coolant.

ALL COOLANTS ARE COMPATIBLE WITH EACH OTHER:

Long-life organic acid coolants should generally not be mixed with old school inorganic additive coolants. Some long-life coolants are formulated to be compatible with the older inorganic additive coolants, but others, when mixed, form an especially gooey gel like substance that can clog radiators internally and greatly inhibit cooling. In general, when changing coolants, flush out the cooling systems as well as storage tanks and service truck reservoirs to avoid problems.

SCA (SUPPLEMENTAL COOLANT ADDITIVE) FILTERS CAN BE USED WITH ANY COOLANT:

When using organic acid long-life coolers, do not use SCA coolant filters. This practice can result in clogged and overheating cooling systems.

THE THICKER THE CORE, THE BETTER THE COOLING:

Depending on the application, this is true – up to a point. However, in mining and other dusty, dirty applications, thicker is not always better. Cooling systems that see a lot of dust, dirt, or trash need to be thinner for better cleanability. A thicker core will cool slightly better when it is new, but it will also clog faster, be a lot more expensive, and harder to clean. We design our coolers for peak efficiency – and cleanability. The small bump in performance from an additional row only lasts a short time and that 10- 20% more expensive cooler you just bought is now clogged and much harder to clean.

We hope you've found this helpful. Our L&M service reps have much more information to share. Give them a shout if you have other questions.

Don Chisholm

