

SPANNERMAN ANSWERS YOUR QUESTIONS

OVERCOOLING

I own a brand-new American motorhome built on a Freightliner chassis and powered by a Cummins 330bhp diesel engine. The engine appears to be running too cool – 168 degrees Fahrenheit – even when working hard on the hills. I know this is not good for fuel economy or my engine. I'm getting only 7.5 miles per gallon. I have had the cooling system thermostat changed but that did not help. My Cummins engine manual states that the engine is supposed to run between 180 degrees and 195 degrees Fahrenheit and that continuous running outside these parameters will cause damage.

I recently took the coach to an experienced workshop to have the cooling system tested. The mechanics detected a problem but did not know how to fix it. The highest temperature the mechanic could get the engine to register at on his computer was 175.6 degrees Fahrenheit, with the radiator completely blocked with cardboard and the rpm set at 1,500 for 15 minutes. My Allison transmission fluid level check always tells me that the temperature is too cold to check (lower than 160 degrees. My Allison manual tells me to operate between 160 and 230°F.

When I check the radiator from the rear of the coach, I find there is warm air coming from the first 5 or 6 inches toward the right side. As I move my hands toward the left side, the air is cold – ice cold. Could the problem be related to the direct-drive fan? The transmission cooler is cooled by the same fan. I have a friend who is experiencing the same problem with his coach. I would appreciate any help you can give me.

The direct-drive fan has a thermostat that is separate from the engine thermostat. The direct-drive fan should not operate under 190 degrees; that may be the cause of your cooling problem. I suggest that you contact your nearest authorised Cummins service centre and have them check the system electronically and make any necessary adjustments.

PETROL STABILIZER - YES OR NO?

I own a petrol engined American motorhome and I am confused with the issue of whether to periodically run the engine, or not, when the motorhome will be sitting for several months (could be many months). I read somewhere that I should add a petrol stabilizer during the last fill-up, run it through the system, shut the engine down, and not to start it again, because doing so would wash down the cylinder walls and cause damage. That's what I'm doing now. Prior to this, about once a month I would run the engine at high idle for about 30 minutes, run through the gears, then shut it down. I've had several people tell me I should continue doing

this. They say it's not good for the system as a whole to just sit. Any light you can shed on this will be appreciated.

I feel that adding a fuel stabilizer during the last fill-up is the proper procedure. A petrol stabilizer that is used often in the US is STABIL. It can be purchased in most automotive stores. Running the engine once a month could create a wash-down of the cylinders; however, if you run the engine approximately 30 minutes at a high idle, as you have noted you do, this should be adequate to heat the engine and dissipate the moisture from within the engine.

FRIDGE COOLER PROBLEM

Being new to owning an American motorhome I accidentally did not have my motorhome fully levelled while camping and, therefore, I now have a leak in my RV refrigerator. I am getting that wonderful ammonia smell when the door is opened. How hard is it to remove the refrigerator? I live in a small town. Would a local mechanic be able to help me? I am guessing the refrigerator is ruined. Will the refrigerator need to be removed right away?

Just because you did not have your motorhome level whilst operating the fridge does not necessarily cause the cooling to leak. Unless you have a refrigerator that was built prior to about 1983, it is unlikely that the off-level condition was the cause of your problem. Around 1983 the construction of the heat exchanger at the boiler was changed dramatically to make it practically impossible for an off-level condition to lead to a damaged cooling unit. However it could stop it working and you may have to have to remove the fridge and lay it on its side overnight and then replaced it could work again. The cooling unit in these fridges is a sealed system and the only way for the ammonia to leak out is when the cooling unit corrodes and perforates allowing the ammonia to escape.

Once the ammonia has escaped the entire cooling unit will have to be replaced. The average life of a cooling unit is about 10 or 15 years.

Today, and even prior to 1983, the most likely cause of a hydrogen and/or ammonia leak is the chemical reaction of the ammonia deteriorating the ferrous pipes. If the crack is situated at or near an exposed section of piping at the rear of the refrigerator, a bright yellow residue usually is visible. If the leak is in a section of pipe hidden by insulation (the more common occurrence), you may not see it. But any indication of an ammonia smell confirms a leak.

The first thing to be concerned about is ridding the ammonia smell from the motorhome. Be sure you open all the windows to air the coach out and refrain from using the RV until the odor has dissipated. Ammonia can be quite hazardous.

You have several options with regard to replacing the cooling unit. Most service centres give owners the choice of a lower-cost refurbished cooling unit with a shorter expected life or a new cooling unit that has

never been in service, which means all of the piping is factory fresh. The entire replacement can take anywhere from two to four hours to complete depending on the model. Cooling units cannot be repaired in the field – they must be replaced, and this is not an inexpensive venture. Oftentimes RV owners must contemplate a third option – a complete refrigerator replacement versus the cooling unit replacement. It depends on the age of the refrigerator and how fond you are of it. With units around eight years old, or older, seriously consider replacing the refrigerator. You will have a new unit warranty and all-new parts.

It's best to let the service centre remove the refrigerator and only allow a competent RV service technician to perform the replacement. Oftentimes the refrigerator will not fit through the entry door without removing some components and/or the entry door itself. In some cases, the cooling unit is replaced inside the RV.

WATER HEATER OVERHEAT CUT-OUT

I recently purchased a Hot-Rodd kit to fit to my Suburban water heater. Fitting the kit was fairly straight forward and I installed the supplied thermostat on top of and in touch with the top of the boiler, as suggested in the instructions. The boiler worked perfectly for the first couple of weeks but then I noticed that it would not fire-up on gas although it worked perfectly well on the electric.

On closer inspection it was noticed that the overheat trip on the boiler had popped so it was reset and everything seemed alright for a further few days and then the same thing happened again.

Can you throw some light on this problem.

The answer to the problem you have been experiencing is very simple. The overheat trip on your boiler is preset by the manufacturer whilst the thermostat on the Hott-Rodd can be adjusted. All you need to do is set this thermostat that controls the Hott-Rodd at a lower setting than the boiler overheat trip.

However a little bit of trial and error will be required as the calibration marks on the Hott-Rodd thermostats should only be used as a guide. Start with the stat turned down and gradually increase the temperature setting until the water reaches a temperature that suits you without tripping the boiler trip.

TECHNICAL QUESTIONS

If you have a technical question that you would like answering please send it to: SPANNERMAN, ARVM, MONTROSE, CROWN HILL, GREAT DALBY, LE14 2ER. Fax. 01664 481400 Email: ableisure@btinternet.com

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