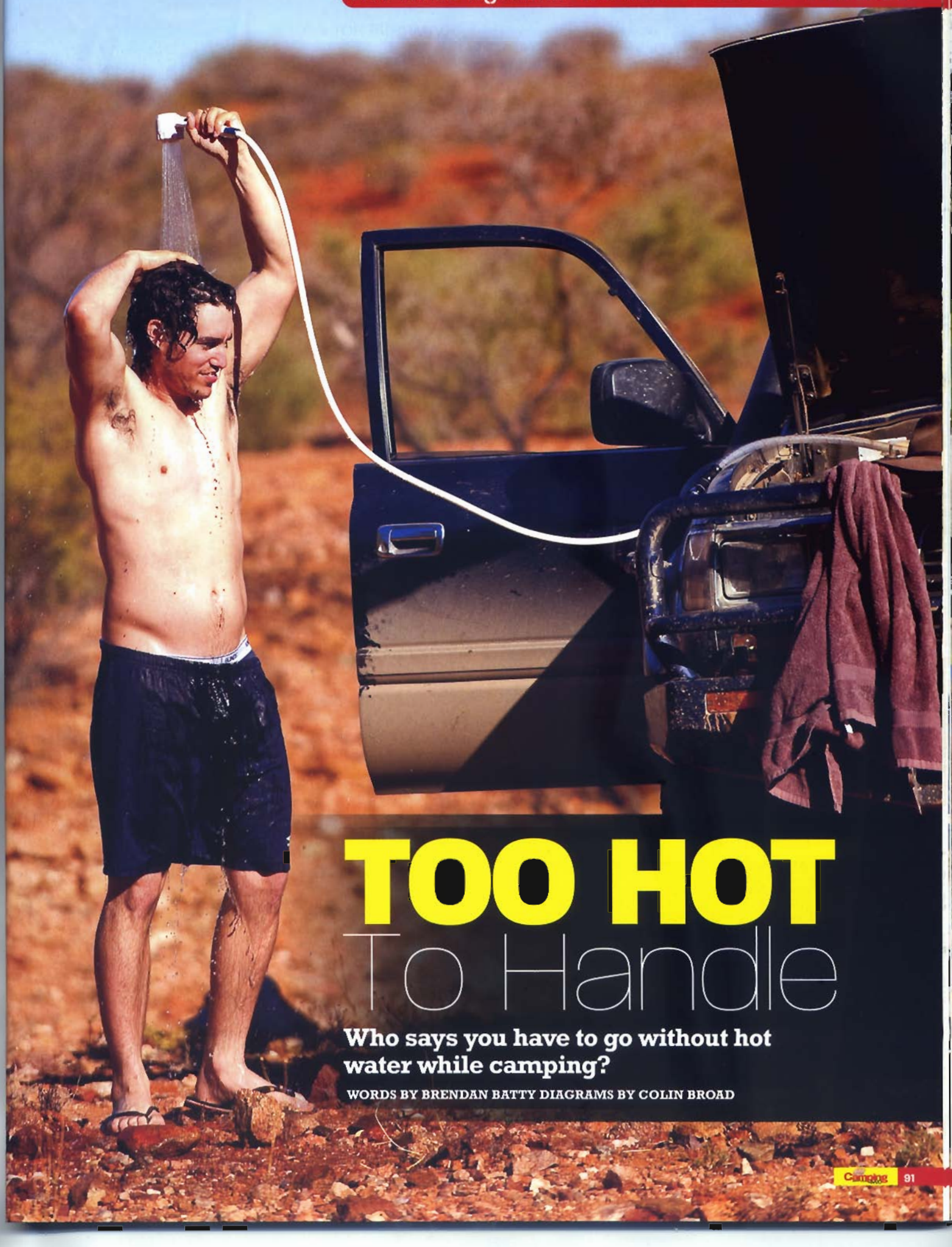


TOO HOT To Handle

Who says you have to go without hot water while camping?

WORDS BY BRENDAN BATTY DIAGRAMS BY COLIN BROAD

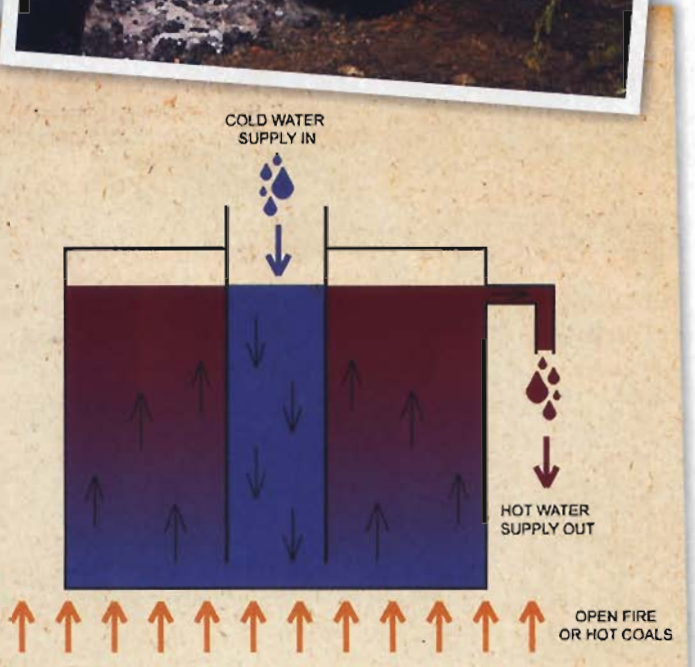
CAMPING TECH Hot Water Systems

One of the great things about camping is that we get the chance to get away from all of the technology and noise and digital stimulation that the world seems to think are necessary. No TV, no FaceSpace, limited phone service and a chance to just unwind.

There is a sort of self-gratification in living with the bare essentials that appeals to the Aussie story telling mentality, where the truth isn't necessarily as important as the response the story gets. But no matter how rough or remote many of us make our camping trips appear to our non-camping mates, I don't think many of us would turn down the offer of a decent hot shower every once in a while.

There are countless different ways of heating up your water for a shower or doing the dishes, or just keeping the missus happy, but in the end they all boil down (pun intended) to the same principle – putting the cold water in contact with something hotter.

In this article I am going to look at three common hot water systems available to campers and not only find out how they work, but what are their good and bad points. By the end, not only will you seem like the expert at your next campfire discussion, but should even be able to find the right hot water system for your needs.



CONVECTION WATER HEATER

CAMPFIRE HOT WATER

Campfire hot water systems are an old-fashioned way of keeping a constant supply of near boiling water for use around your campsite. The theory is easy – put water next to a fire and it will heat up. The problem with just using a billy or a kettle though is that they run out too quickly, and we are all so used to having almost instant hot water, none of us want to wait while billies get boiled just to have a shower or wash the dishes or just make a coffee.

The campfire hot water system remedies that though. Usually made from a 20L drum, a funnel or pipe is inserted in the lid and stops just before the bottom of the drum. Up near the rim of the unit, a small spout pops out the side.

The theory goes something like this. Fill the drum with water until it is just below the spout, then sit it really close to the fire. After a while the water in your campfire hot water service will be close to boiling and will stay that temperature as long as the fire is going. Whenever you want some water, be it a cup for your coffee, or a couple of litres for washing the dishes, or even 10 for a shower – just pour cold water down the funnel in the middle of the lid. The cold water has to travel all the way down the funnel and to the bottom of the drum before it can mix with the rest of the water. The cold water pushes the already hot water up and the only place it can go is out of the spout. Easy as.

The major benefits of this system are obvious. They are super cheap. You could make one for next to nothing and can even buy them for $50 or so. Secondly, you will never get to the unit to find it empty as to access the water, you have to fill it up, you replace exactly what you use.

On the downside, when you are finished camping, you will have approximately 20L of hot water you have no use for and a 20L drum with a funnel sticking up from the lid is rather bulky and hard to store. They also take a considerable amount of time to heat up, are reliant on a campfire and aren't great for showering. That aside, they do have their uses, and do come in handy at the campsite.

HEAT EXCHANGER WATER HEATER

VEHICLE-MOUNTED HEAT EXCHANGERS

Vehicle-mounted heat exchangers are another very simple system when broken down to their bare basics. Once you add the 12V water pump and your 4WDs cooling system, they do tend to get a little more complicated – but not by much.

Hot coolant from the engine's cooling system is pumped through the heat exchanger and out the other side. Running through the middle of this is a tightly bunched coil of copper pipe. Cold water is pumped through the coil and heated up by the hot coolant.

One of the great things about these systems is that the temperature of the water can be regulated. If you pump water through them quickly, it doesn't get as much of a chance to heat up so comes out cool(ish).

If you slow down the flow, it has more time to heat up so comes out hotter. On top of that, if you put your 4WD's heater on hot, more hot coolant is cycled through the heat exchanger so your shower can be hotter. Increasing engine revs will also perform a similar function.

These systems do have their limitations, however. For example, a lot of newer vehicles with climate control may have trouble regulating the heat through the heater, because they are controlled by computers and not a simple tap on the cooling system.

Also, if you temporarily stop the flow of water through the heat exchanger (to save water while you put shampoo in your hair for example), the fresh water will boil and could burn you coming out. That said, providing you have enough fuel to keep your 4WD running and a big enough water supply (a river or stream), you can have super long hot showers. They also take up zero packing space in your 4WD, so you have more room for other essentials, like a well stocked fridge or an extra case.

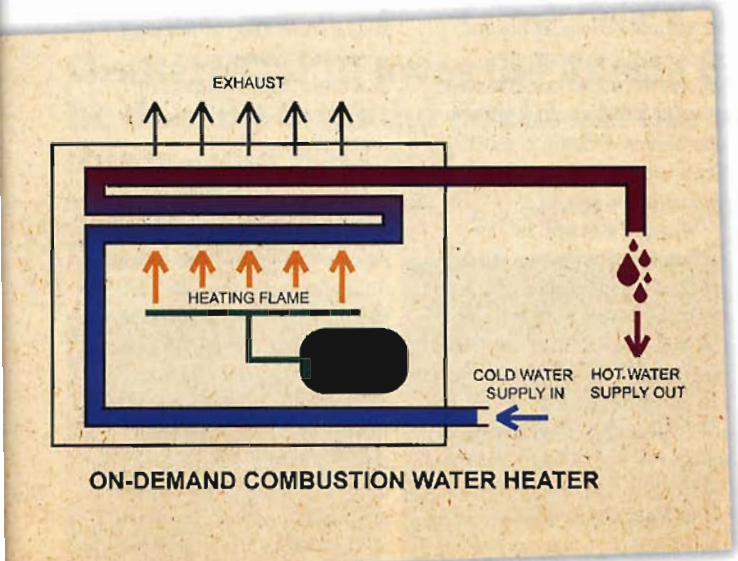
THERE ARE COUNTLESS DIFFERENT WAYS OF HEATING UP YOUR WATER

PORTABLE GAS HOT WATER

There are a number of these systems on the camping market these days and are becoming very popular. As a fully self-contained portable unit, their versatility is next to none and the ability to provide almost instant hot water on demand makes them very attractive, especially to families with young children. Most units vary in basic design, although work on a very similar principle.

The gas system provides the fuel for a gas burner, similar to those you might find on a cooker. A coil of copper tubing through which the water runs, sits above the flame. As the burner covers such a large surface area of the heat exchanger, the water inside is rapidly heated up as it is pumped through the unit. Adjusting the temperature is as easy as adjusting the intensity of the flame from the burner. As most of these units have a pre-determined flow rate (usually around 2-3L/min), the manufacturers can engineer the length of the copper heat exchanger so that they know exactly how hot the water will be when it comes out of the shower head.

There are a lot of pluses to this type of system, not just the convenience of portability. They don't require a vehicle to run so you can set up your shower a little away from camp (no risk of water seeping through your kitchen). Being an almost instant hot water source, they are great when it comes time to do the dishes, and the water temperature is easily regulated. On the downside, they can be a bit bulky to lug around and most don't recommend sucking water from a creek or river. Small considerations, though, for such a luxury.



ON-DEMAND COMBUSTION WATER HEATER

THANKS

The following companies and experts in camping hot water assisted in this article:

Coleman Australia
www.colemanaustralia.com.au

Twine 4WD Showers
www.twine4wdshowers.com.au

Hillbilly Camping Gear
www.campingwithhillbilly.com