

What are Weep Wells?



Have you ever noticed that when you replace a water pump the replacement pump doesn't look quite like the OEM pump you removed? Sometimes there are what appears to be a freeze plug and another boss on the pump housing. Why the difference?

Why They Weep

Coolant has a specific role as it relates to the water pump's seal. To keep a pump's rotating seal faces from overheating and failing, the seal must consistently be "wetted" by coolant. Coolant absorbs heat from the seal faces and provides face lubrication. During this "wetting" process, a small amount of coolant passes the seal faces and exits the water pump through a small hole known as a weep hole. This process is known as weepage. Over time, weepage results in staining and discoloration on the pump housing around the weep hole. At times, a drop or two of coolant may even hang off of the pump or fall to the ground. These situations could often be misinterpreted as evidence of a leak, resulting in a premature water pump replacement.

Weep No More

Both OE and aftermarket pump manufacturers have added a provision to conceal normal weepage and avoid unnecessary pump replacement. It is called the weep well. A weep well is a cavity in which weepage is collected and allowed to evaporate rather than cause staining or coolant drips. If the pump's seal truly fails, the weep well will fill up and coolant will exit through a hole at the top of the well.

