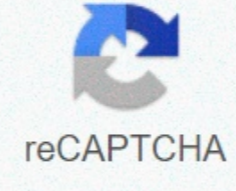




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## Perkins 6-354 water pump

Small parts of a car's engine are often easy to overlook, but these components are often some of the most important to keep everything running properly. When it comes to keeping your engine cool, the water pump is an efficient and integral part of the process. But how long can you expect it to last? The water pump endures constant use inside an engine and allows the engine to withstand the intense heat that combustion produces. When your engine is on, the water pump circulates coolant, or antifreeze, in the cylinder head and engine block to cool down the engine. After the coolant passes through the engine it is sent back into the cooler to cool before the engine again. Ad When it comes to water pump life, they actually tend to last a long time. It is recommended that your engine's water pump be replaced when servicing the timing belt. Water pumps are powered by the timing belt, or an accessory drive belt that spins a pulley outside the pump that turns the inner impeller. On various makes and models of cars, these belts can last anywhere between 60,000 and 90,000 miles (96,561 to 144,841 kilometers), so you can expect your water pump to last about that long as well. Of course, some water pumps may not last quite that long, but manufacturers are making efforts to ensure water pumps last a long time due to adverse effects on the engine if they fail. To avoid running into the problem of a failed water pump, there are a couple of warning signs that you can look for. The first is if coolant leaks around the water pump. Crying holes located on the casing of the water pump will leak coolant when the pump fails. The second red flag is if the water pump makes more noise than usual. This can be from a defective impeller or an impeller that is no longer properly attached to its drive shaft. It's unlikely you'll have to diagnose the car's water pump problem yourself, but just remember that it's always a good idea to have your water pump replaced when the vehicle manufacturer recommends replacing the timing belt. For more information on water pumps and other related topics, follow the links on the next page. Seaweed WrenchScrewdriverGasket sealing machineWater pump gasketsAntifreezeAlthough the water pump plays an important role in the motor pulley system, the main purpose of the 350's water pump is to pull antifreeze from inside the cooler, distribute that antifreeze throughout the engine and then pull the antifreeze back to the cooler to be cooled. The 350's water pump is a fairly simple design, consisting of a rotor and a seal. When that seal breaks, the antifreeze leaks out of the front of the water pump. Unfortunately, the 350's water pump cannot be repaired, but replacing the water pump is quite simple. Empty the antifreeze from inside the transmission by turning the drain bolt on to the bottom of the with pliers or with a wrench. Insert the drain plug back into the cooler after the antifreeze has been completely emptied. Loosen the generator and power steering pump to remove its belts from the water pump pulley. Both the generator and, if applicable, the power steering pump attach to the sides of the engine with two mounting brackets. The top and bottom of each accessory is a single bolt, which holds the accessory to their consoles. Loosen these bolts with a wrench, then lower the accessory against the motor to remove the tension on its drive belt, then lift the belt off of the pulley of the water pump. Remove the fan blades and pulley from the front of the water pump. The four fan blades are a single unit attached to the tip of the water pump with four bolts. Remove the bolts with a wrench, then pull the fan blade unit off of the water pump. Lift the pulley off the front of the engine and pull the pump away from the engine to remove it. Peel off the two gaskets on the back of the water pump of the pump. Apply gasket lighter on either side of both water pump replacement gaskets, then place the gaskets against the pump. Press the pump into place against the engine, then install and tighten each of the pump's four retaining bolts with a wrench. Slide the lower radiator hose down on the water pump and tighten the hose clamp to secure the hose in place. Place the fan blade unit on the tip of the pump, assemble and then tighten each of the assembly's four retaining bolts with a wrench. Place the pulley of the pump on the front of the water pump, then place both the generator and the power steering pump belts in the grooves of the pulley. Pull the generator away from the engine to tighten its belt, then tighten both of the generator's retaining bolts with a wrench. Tighten the power steering pump belt in the same way. Wait at least three hours for sealer dry gaskets, then fill the cooler with antifreeze to complete the replacement. Comstock/Comstock/Getty Images The water pump on all vehicles acts as the heart of the cooling system. The vehicle water pump, which is usually powered by a belt and pulley arrangement, has internal impellers inside the house that spin at high speed to circulate water. The faster the vehicle goes, the greater the volume of coolant entering the engine. Water pumps can fail for various reasons, which include defective seals, bearings, impellers and belts. A vehicle owner can limit troublesome symptoms by looking for specific pointing problems to with the water pump, and that only. If the vehicle starts to overheat and stay in a temperature range that shows above normal conditions, the likely suspected water pump is. If the coolant remains at the correct level without leaks, and the thermostat is working properly, higher than normal temperature may indicate worn impellers that have been rusted and chipped. Plastic impellers on some cars can break, reducing circulation pressure. A constant, higher than normal engine temperature can be caused by damaged impellers. To find a water pump leak, a vehicle owner can place a piece of white writing paper under the water pump and let it remain overnight. This works best if the car has been running for some time. If any leakage has occurred, it will be indicated if there is any leakage. The paper will be wet, usually colored green or orange – the color of the coolant. The leak can come from the water pump house packing or cry holes on the bottom of the water pump. Crying the hole on a water pump acts as a bypass vent or hole. It's at the bottom of the water pump house. When the inner seal breaks down in the water pump, coolant passes the seal and leaks externally. Any drip from this small hole indicates that the seal has failed, and possibly the shaft bearings. A failed seal requires water pump replacement. Water pumps have inner and outer axle bearings that hold the impeller shaft. They have factory-sealed bearing cups that act as permanent lubrication. When the shoulder bearings deteriorate, excess play results in the hub and pulley. Each wobble in the water pump pulley while the engine runs points to poor shaft bearings. A vehicle owner can manually pull the pulley from side to side and up and down, to find any excessive play in the shaft. Worn shaft bearings require a change of water pump. Faulty water pump bearings make a distinct noise when worn or failed. They have a low frequency growling or gravelly sound during engine operation. The noise can be heard especially when the vehicle is idling. Place a screwdriver against the top of the pump housing and listening to the other end towards the ear can enlarge and isolate the sound. Rust and pieces of metal inside the bearing lid cause growling, and sometimes scraping, noise. Poor bearings require a change of water pump. The water pump belt drives the pump pulley. If the belt slides or has been disconnected, the water pump can longer force coolant through the system. Worn and slip belts usually scream at engine start-up. Worn or broken belts must be replaced to protect against severe overheating of the engine. To ensure that our content is always up to date with up-to-date information, best practices, and professional advice, articles are routinely reviewed by industry experts with years of hands-on experience. off on Mar 21, 2020 when you can't silence your RV water pump it can ruin your camping trip. An RV is such a luxury to have outdoors. It's hard to relax and enjoy yourself with a noisy water pump. These tips will make sure you have a good night's sleep on your trip. Installing an Accumulator Accumulator is a storage device that can be installed to keep water under pressure. This will help the pump accommodate all water use in the camper. This will keep the pump from vibrating so much and take the noise problem out of the equation. Fix Rattling PipesAnother thing that can make a lot of noise are water pipes that rattle. These are a simple fix; all you need is some foam pipe insulation. Have one of your camping buddies turn one on and off one of the taps while you walk around and find the exact location of the rattle. You can then put the insulation over the tube and seal the open slot with duct tape. Adjusting CycleSomething that can contribute to a noisy water pump, the pump is turning itself on and off at a fast pace. This can cause vibrating and cause a lot of noise. To check this problem, simply turn on the water very low and see how long it takes to cycle. If the time it waits is not longer than a few seconds, turn the screw until the pump returns to the correct waiting time. This should eliminate the noise from your noisy RV water pump and you can go back to roasting marshmallows. Marshmallows.