2004-2006 Lexus RX - Timing Belt and Water Pump

2004-2006 Lexus RX | Advanced | 4-6 hours | $330 DIY

TOOLS

10mm Socket 12mm Socket 14mm Socket Torque Wrench Flathead Screwdriver Jack Stands Engine Support Bar Harmonic Balancer Puller Timing Belt Tensioner Tool Pry Bar

PARTS

Timing Belt Kit TKT-021 $150.00
Water Pump $100.00
Timing Belt Tensioner $50.00
Idler Pulley $30.00
Water pump gasket or sealant

STEPS

1. **Disconnect the battery and drain the cooling system - Disconnect the negative battery** cable. Drain the coolant into a pan. On the Lexus RX330, timing-belt service usually includes the water pump - plan to replace the pump, tensioner, and idlers as a kit. Wear gloves and eye protection.
2. **Set engine to TDC and lock the timing - Remove belts, pulleys, and timing covers as** required for access. Rotate the engine by hand to Top Dead Center on cylinder 1 and install the factory cam/crank locking pins or marks specified for this engine. Never rely on guesswork for timi...
3. **Relieve tension and remove the old belt and pump - Release the timing-belt tensioner,** slide the belt off the sprockets, and remove the water pump with its bolts (note bolt lengths). Clean all gasket surfaces carefully - do not gouge aluminum mating faces.
4. **Install the new water pump and timing components - Install the new water pump with the** specified gasket or sealant and torque bolts evenly. Fit the new tensioner and idlers. Route the new timing belt per the diagram with correct tooth engagement on crank and cam sprockets.
5. **Set tension, verify marks, and reassemble - Apply tensioner preload per the procedure,** then double-check that all timing marks/locks still align. Rotate the engine by hand at least two full crank revolutions and reconfirm marks before refitting covers, pulleys, and accessory belts.
6. **Refill coolant, start, and verify - Reconnect the battery, refill and bleed the cooling** system, then start the engine and listen for unusual timing noise. Confirm stable temperature, no coolant leaks at the pump, and normal oil pressure. Recheck coolant level after cooldown.

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